Title: Molecular elucidation of brain lipofuscin in aging and Neuronal Ceroid Lipofuscinosis

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Data Description: This file contains the underlying numerical data for all graphical figures that are not otherwise captured in additional supplementary data files.

Data Description: Fig. 1A Kaplan-Meier Survival of WT and PPT1 KO Mice.

	Graphed Data			
	Animal Identifier	Age (Months)	PPT1 KO	WT
	825	7.89040	1	
	824	7.66027	1	
	803	5.42465	1	
	782	7.33150	1	
	786	7.33150	1	
	777	7.95616	1	
	779	7.95616	1	
	788	7.13424	1	
	774	7.82465	1	
	778	7.52876	1	
	796	3.45202	1	
	771	5.16159	1	
	767	6.47664	1	
	742	5.32597	1	
	729	5.72049	1	
	726	7.03554	1	
	713	6.93691	1	
	707	7.23280	1	
	704	8.12046	1	
	694	7.23280	1	
	691	7.23280	1	
	684	7.62731	1	
	672	2.92600	1	
	658	4.83282	1	
possible +/-	656	16.83269	1	
	637	6.87116	1	
	335	7.98895	1	
	324	7.10129	1	
	261	9.59989	1	
	254	6.27938	1	
	243	9.07387	1	
	517	4.63561		1
	538	30.54245		1
	556	23.76985		1
	557	24.85479		1
	596	18.37808		1
	610	16.47123		1
	612	1.90685		1
	613	16.37260		1
	616	13.18356		1
	647	15.84657		1
	652	26.95889		1
	676	6.73972		1
	734	3.97808		1
	812	15.68219		1
	813	15.68219		1
	814	15.68219		1
	826	16.43835		1
	860	14.23561		1
	B6	12.19726		1
	B6	23.21095		1
	873	20.51500		1
	868	21.63290		1
	869	21.63290		1
	B6	18.83830		1
	842	24.19720		1
	846	23.70410		1

Summary Data		
Genotype	Sample Size	Median Survival (Months)
PPT1 KO	31	7.2328
WT	26	16.4548

Curve Comparison	
Statistical Test	Log-rank (Mantel-Cox) test
Chi square	164.2
df	3
P value	<0.0001
P value summary	****
Are the survival curves sig different?	Yes

Data Description: Fig. 1C + 1E. Lipofuscin loads by whole brain and gross anatomical region

Fig. 1C. Lipofuscin Load - Whole Brain				
PPT1-2	0.17832575	0.2705605	0.20437942	0.30037725
PPT1-4	0.562232	0.55230242	0.598448	0.49514642
PPT1-7	0.8408435	0.82991775	0.762933	0.82226425
WT-2	0.00640625	0.00382275	0.01112625	0.005255
WT-12	0.085304	0.10895625	0.10177125	0.1071335
WT-18	0.150266	0.12752375	0.16077917	0.19026025
WT-24	0.210339	0.26276925	0.23937075	0.23145125

Fig. 1C. Simple Linear Regression

Best-fit values		
	PPT1 KO	WT
Slope	0.1129	0.01025
Y-intercept	0.04549	-0.01841
X-intercept	-0.4028	1.795
1/slope	8.856	97.52

Std. Error		
	PPT1 KO	WT
Slope	0.008555	0.0005552
Y-intercept	0.04103	0.008987

95% Confidence Intervals		
	PPT1 KO	WT
Slope	0.09386 to 0.1320	0.009064 to 0.01145
Y-intercept	-0.04594 to 0.1369	-0.03768 to 0.0008683
X-intercept	-1.437 to 0.3533	-0.09413 to 3.350

Goodness of Fit		
	PPT1 KO	WT
R squared	0.9457	0.9606
Sy.x	0.0609	0.01804

	PPT1 KO	WT
Equation	Y = 0.1129*X + 0.04549	Y = 0.01025*X - 0.01841

Fig. 1E QUINT Custom Region Loads per Biological Replicate	PPT1-2				PPT1-4				PPT1-7				WT-2				WT-12				WT-18				WT-24			
Cortex	0.037607	0.04665125	0.038598	0.04783175	0.076325	0.0815675	0.08071425	0.06979325	0.11426425	0.12473975	0.1025255	0.1070445	0.0003075	0.0007105	0.000767	0.00056	0.017036	0.02176925	0.01763275	0.0203635	0.0296035	0.0208005	0.0280065	0.02732025	0.03691575	0.04404275	0.03570975	0.03500825
Fibretracts	0.0093135	0.01602225	0.01165875	0.01559975	0.03515125	0.0303855	0.0385285	0.0227565	0.060462	0.05810975	0.04565375	0.06083475	0.0007465	0.00047425	0.00163775	0.00035575	0.0060155	0.00655425	0.006601	0.00680025	0.00844525	0.009021	0.01025025	0.0093655	0.01218675	0.013199	0.01362175	0.012667
Hippo	0.02417175	0.0275025	0.02300867	0.034877	0.0527605	0.053710667	0.05312975	0.04340225	0.067854	0.07009975	0.0604835	0.07132525	0.0004625	0.00023525	0.00071775	0.00033325	0.00619525	0.006398	0.00724325	0.00777725	0.01254925	0.00978075	0.01157175	0.01450925	0.016171	0.02040125	0.0162575	0.016532
Olfactory	0.0147265	0.024785	0.02140475	0.025687	0.0650265	0.06391	0.0743825	0.04114675	0.10082225	0.107726	0.0939345	0.08971625	0.00167725	0.000437	0.0015685	0.00025925	0.00591475	0.00779975	0.0073305	0.0061795	0.009976	0.00798075	0.0079725	0.01119575	0.0128855	0.0165935	0.01548025	0.01245425
Hypothalamus	0.01432925	0.0325095	0.0194605	0.03327625	0.0705125	0.0725015	0.07694875	0.0518775	0.101018	0.0902685	0.089975	0.07906275	0.00053575	0.00029625	0.0005115	0.000288	0.0145215	0.02199175	0.02320725	0.02067975	0.02580575	0.02939475	0.03338725	0.038062	0.04445025	0.0501715	0.04870325	0.052841
Striatum_Pallidum	0.0155165	0.02872425	0.018304	0.035664	0.06405325	0.06294975	0.0784875	0.0559885	0.08346975	0.0853375	0.08592	0.088996	0.0002025	0.00020375	0.0003925	0.00046875	0.00604075	0.009329	0.0091705	0.007454	0.016059	0.0123655	0.01801875	0.016473	0.02121275	0.0284895	0.02501775	0.0275785
Mid_Hind_Medulla	0.0179445	0.02693425	0.02095225	0.030044	0.06243725	0.0586365	0.06292075	0.05773825	0.08735625	0.08714075	0.0813575	0.08693325	0.0008145	0.00061975	0.0008995	0.00067175	0.01008975	0.01236175	0.01029425	0.01412	0.018769	0.0151105	0.019283	0.024354	0.0249805	0.031863	0.0306585	0.028101
Thalamus	0.0323465	0.0452505	0.03703825	0.0579305	0.0827605	0.085967	0.08370225	0.08587125	0.11627	0.1143245	0.1093185	0.1246565	0.00091775	0.00052375	0.00129075	0.0014445	0.00978175	0.0137725	0.0125635	0.01039725	0.01691725	0.0150315	0.02162	0.03155175	0.0271075	0.0341655	0.037966	0.03183025
Cerebellum	0.00761275	0.018328	0.01192425	0.0151345	0.045984	0.03684825	0.04468825	0.056684667	0.081696	0.08086025	0.08760725	0.10672425	0.000633	0.00023525	0.00286	0.00032325	0.0076655	0.006796	0.005978	0.0114525	0.0081275	0.006355	0.00809967	0.0144495	0.01189075	0.01843975	0.01337225	0.0129885
VentricularSystem	0.0047575	0.003853	0.00203	0.0043325	0.00718375	0.00582575	0.0049455	0.0098875	0.027631	0.011311	0.0061575	0.00697075	0.000109	0.000087	0.000481	0.0005505	0.00204325	0.002184	0.00175025	0.0019095	0.0040135	0.0016835	0.0025695	0.00297925	0.00253825	0.0054035	0.00258375	0.0014505

Fig 1E. QUINT Custom Region Load Average	PPT1-2	PPT1-4	PPT1-7	WT-2	WT-12	WT-18	WT-24
CTX	0.042672	0.07710938	0.1121435	0.00058625	0.01920038	0.026432688	0.03791913
OLF	0.01314856	0.03170544	0.05626506	0.00080356	0.00649275	0.0092705	0.01291863
HPF	0.02738998	0.05075079	0.06744063	0.00043719	0.00690344	0.01210275	0.01734044
STR/PAL	0.02165081	0.06111644	0.09804975	0.0009855	0.00680613	0.00928125	0.01435338
TH	0.02489388	0.06796006	0.09008106	0.00040788	0.02010006	0.031662438	0.0490415
HY	0.02455219	0.06536975	0.08593081	0.00031688	0.00799856	0.015729063	0.02557463
MB/P/MY	0.02396875	0.06043319	0.08569694	0.00075138	0.01171644	0.019379125	0.02890075
CB	0.04314144	0.08457525	0.11614238	0.00104419	0.01162875	0.021280125	0.03276731
FT	0.01324988	0.04605129	0.08922194	0.00101288	0.007973	0.009257917	0.01417281
VS	0.00374325	0.00696063	0.01301756	0.00030688	0.00197175	0.002811438	0.002994

Data Description: Fig. 1D + S1A. Lipofuscin loads by fine anatomical region quantified by QUINT. Rows with no values indicate regions that were not measured. These are represented in gray in coronal heatmaps and in white in the traditional heatmap. Further in traditional heatmap, rows with no values were excluded from graph unless the region was measured in at least 2 mice for that row.

Original Order	Primary Annotation	Secondary Annotation	Tertiary Annotation	Region ID	Region Name	PPT1-2 Average Load Set 1	PPT1-2 Average Load Set 2	PPT1-2 Average Load Set 3	PPT1-2 Average Load Set 4	PPT1-4 Average Load Set 1	PPT1-4 Average Load Set 2	PPT1-4 Average Load Set 3	PPT1-4 Average Load Set 4	PPT1-7 Average Load Set 1	PPT1-7 Average Load Set 2	PPT1-7 Average Load Set 3	PPT1-7 Average Load Set 4	WT-2 Average Load Set 1	WT-2 Average Load Set 2	WT-2 Average Load Set 3	WT-2 Average Load Set 4	WT-12 Average Load Set 1	WT-12 Average Load Set 2	WT-12 Average Load Set 3	WT-12 Average Load Set 4	WT-18 Average Load Set 1	WT-18 Average Load Set 2	WT-18 Average Load Set 3	WT-18 Average Load Set 4	WT-24 Average Load Set 1	WT-24 Average Load Set 2	WT-24 Average Load Set 3	WT-24 Average Load Set 4
1	Clear Label	Clear Label	Clear Label	0	**Clear Label**	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.08318136	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
2	root	root	root	997	**root**	0.007113543	0.005100448	0.003550081	0.00705037	0.009921246	0.01023771	0.013121591	0.016173961	0.02073297	0.02424568	0.00714718	0.021234693	0.00441482	0.00027233	0.000620282	0.00069889	0.003149211	0.00336338	0.002388651	0.00572426	0.00860499	0.008017222	0.00338681	0.006594808	0.012009666	0.006498711	0.004504441	0.005745516
3	Basic	Basic	Basic	8	**Basic cell groups and regions**	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
4	CH	CH	CH	567	**Cerebrum**	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
5	CTX	CTX	CTX	688	**Cerebral cortex**	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
6	CTX	CTXpl	CTXpl	695	**Cortical plate**	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
7	CTX	Isocortex	Isocortex	315	**Isocortex**	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
8	CTX	FRP	FRP	184	Frontal pole, cerebral cortex	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
9	CTX	FRP	FRP1	68	Frontal pole, layer 1	0.008140841	0.00186807	0.00470111	0.00212446	0.01773722	0.01040249	0.02219642	0.01003611	0.08209247	0.07581434	0.05597343	0.06585223	#DIV/0!	0.00093499	#DIV/0!	#DIV/0!	0.00456103	0.00599987	0.00388689	0.00293377	0.00203775	0.00383939	0.00928591	0.00559726	0.00925685	0.01296028	0.00501724	0.00382649
10	CTX	FRP	FRP2/3	667	Frontal pole, layer 2/3	0.02540056	0.02414002	0.02348111	0.02227241	0.06451277	0.05249422	0.063036	0.06027884	0.10574132	0.12533305	0.09702689	0.10839886	#DIV/0!	0.00081917	0.00031277	0.00016069	0.01219382	0.0177518	0.01491198	0.01508024	0.01241404	0.02478854	0.01694374	0.02145264	0.03630641	0.03786793	0.02630022	0.02223261
11	CTX	FRP	FRP5	526157192	Frontal pole, layer 5	0.01644402	0.02659258	0.02243373	0.02660463	0.05643826	0.05083198	0.0558516	0.06252776	0.13306032	0.10777487	0.08037272	0.09569977	0.00096029	0.0002441	0.00038268	0.0010895	0.01014318	0.0222573	0.01510714	0.01629511	0.0138594	0.02498889	0.02160138	0.02325465	0.03679619	0.03248811	0.03053163	0.02535083
12	CTX	FRP	FRP6a	526157196	Frontal pole, layer 6a	0.03519761	0.03653554	0.03138619	0.05193244	0.06107487	0.05908873	0.07476086	0.06009152	0.13515017	0.10777264	0.08913579	0.10232771	#DIV/0!	0.00159311	0.00028806	0.00054743	0.01986513	0.01684379	0.02247327	0.01952748	0.00228826	0.03328326	0.02425364	0.02733012	0.04193517	0.03442027	0.04523894	0.03579598
13	CTX	FRP	FRP6b	526322264	Frontal pole, layer 6b	0.00801644	#DIV/0!	#DIV/0!	#DIV/0!	0.09800761	#DIV/0!	0.13965728	#DIV/0!	#DIV/0!	0.0921105	0.13694268	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.02115041	#DIV/0!	#DIV/0!	#DIV/0!	0.11391782	0.01362604	#DIV/0!	0.07711646	0.09833197	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
14	CTX	MO	MO5	500	Somatomotor areas	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
15	CTX	MO	MO1	107	Somatomotor areas, Layer 1	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
16	CTX	MO	MO2/3	219	Somatomotor areas, Layer 2/3	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
17	CTX	MO	MO5	299	Somatomotor areas, Layer 5	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
18	CTX	MO	MO6a	644	Somatomotor areas, Layer 6a	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
19	CTX	MO	MO6b	947	Somatomotor areas, Layer 6b	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
20	CTX	MO	MOp	985	Primary motor area	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
21	CTX	MO	MOp1	320	Primary motor area, Layer 1	0.006133163	0.012307817	0.012372814	0.012327214	0.024546609	0.031428	0.031473	0.031073	0.051531126	0.0715664	0.057764574	0.060270962	0.000966884	0.00059322	0.000288681	0.000280224	0.006233788	0.009778193	0.007487345	0.007247327	0.00522838	0.008738738	0.011125	0.00641853	0.006204939	0.008801793	0.009087714
22	CTX	MO	MOp2/3	943	Primary motor area, Layer 2/3	0.04114494	0.05025725	0.04894641	0.05572708	0.07966993	0.0765672	0.08574055	0.07513961	0.13353041	0.15291775	0.13116566	0.14690218	0.00018648	#DIV/0!	0.00044317	0.00019295	0.02578192	0.02009366	0.01312198	0.01719536	0.01815274	0.02177056	0.01930969	0.01631877	0.03195644	0.03677214	0.02737412	0.03628905
23	CTX	MO	MOp5	648	Primary motor area, Layer 5	0.03210942	0.05271537	0.04826202	0.06324544	0.07925025	0.11688339	0.07880509	0.06986643	0.11673554	0.13454468	0.1108823	0.11550353	0.00033475	0.00050269	0.00106946	0.000275	0.0296783	0.02933276	0.0212211	0.03047891	0.02782508	0.03416054	0.0322467	0.03153587	0.03958389	0.05578228	0.03911378	0.03626082
24	CTX	MO	MOp6a	844	Primary motor area, Layer 6a	0.04104515	0.06131487	0.06019507	0.06523357	0.08206094	0.11169526	0.09134631	0.06624516	0.50133832	#DIV/0!	0.10999604	0.10392594	0.00446371	0.00119394	0.00177646	0.00068601	0.02609243	0.02959193	0.03360724	0.04169536	0.03654905	0.04486469	0.04379639	0.03824793	0.04880945	0.05611985	0.03947667	0.04932358
25	CTX	MO	MOp6b	882	Primary motor area, Layer 6b	0.02453777	0.04063462	0.04623899	0.07814462	0.08342275	0.09018851	0.07926351	0.07294668	0.14538643	#DIV/0!	0.10188133	0.10044493	0.00118845	0.00414126	0.00373166	0.00074942	0.01597305	0.02037183	0.02529084	0.01981599	0.01499206	0.01673123	0.02560287	0.03899294	0.06632677	0.02507523	0.04933324
26	CTX	MO	MOs	993	Secondary motor area	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
27	CTX	MO	MOs1	656	Secondary motor area, layer 1	0.01241444	0.00793721	0.00955454	0.00597429	0.02185074	0.02316019	0.02589586	0.0143689	0.06973435	0.0754712	0.04628832	0.07062272	0.00013885	0.00013217	8.069E-05	0.00016827	0.00394672	0.00694347	0.00527828	0.00588689	0.00518051	0.00599642	0.00493541	0.00834336	0.00717496	0.00890211	0.00642338	0.00524586
28	CTX	MO	MOs2/3	962	Secondary motor area, layer 2/3	0.04084512	0.04047717	0.03314078	0.04062051	0.068556	0.06883876	0.07920395	0.06870743	0.12106646	0.13331364	0.11483083	0.12293681	0.00013652	0.00031323	9.921E-05	0.00011114	0.00152332	0.00309737	0.00142486	0.00228329	0.0181772	0.02778133	0.02605869	0.07232357	0.03307721	0.04106239	0.03095078	0.02554263
29	CTX	MO	MOs5	767	Secondary motor area, layer 5	0.03421442	0.04082289	0.037674	0.04114035	0.0649411	0.07921826	0.06556091	0.06183889	0.12096342	0.12031987	0.09673645	0.0995727	0.00017308	0.00075669	0.00036953	0.00052962	0.02029267	0.02302536	0.0192087	0.02377826	0.0206492	0.03230253	0.04438885	0.02628981	0.03800993	0.04476866	0.03978226	0.03029595
30	CTX	MO	MOs6a	1021	Secondary motor area, layer 6a	0.03767375	0.04566432	0.04986881	0.04520842	0.07491659	0.09335314	0.08192347	0.07223429	0.67461876	0.13508091	0.10222596	0.10954126	0.00018216	0.0008467	0.00135803	0.00072572	0.02367469	0.02433619	0.02013893	0.019137	0.02804936	0.03266142	0.0339159	0.02946676	0.04235439	0.04981896	0.03792725	0.0338191
31	CTX	MO	MOs6b	1085	Secondary motor area, layer 6b	0.01387747	0.06643559	0.04644598	0.05251923	0.08686742	0.06443076	0.07761004	0.05743735	0.0610376	0.11551673	0.09239469	0.06385156	#DIV/0!	0.00306517	0.00405658	0.00137116	0.00727212	0.01125452	0.03389001	0.01751282	0.01234854	0.00996546	0.06248254	0.01976049	0.04078313	0.02351017	0.03389159	0.0417406
32	CTX	SS	SS	453	Somatosensory areas	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
33	CTX	SS	SS1	12993	Somatosensory areas, layer 1	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
34	CTX	SS	SS2/3	12994	Somatosensory areas, layer 2/3	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
35	CTX	SS	SS4	12995	Somatosensory areas, layer 4	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
36	CTX	SS	SS5	12996	Somatosensory areas, layer 5	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
37	CTX	SS	SS6a	12997	Somatosensory areas, layer 6a	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
38	CTX	SS	SS6b	12998	Somatosensory areas, layer 6b	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
39	CTX	SS	SSp	322	Primary somatosensory area	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
40	CTX	SS	SSp1	793	Primary somatosensory area, layer 1	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
41	CTX	SS	SSp2/3	346	Primary somatosensory area, layer 2/3	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
42	CTX	SS	SSp4	865	Primary somatosensory area, layer 4	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
43	CTX	SS	SSp5	921	Primary somatosensory area, layer 5	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
44	CTX	SS	SSp6a	686	Primary somatosensory area, layer 6a	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
45	CTX	SS	SSp6b	719	Primary somatosensory area, layer 6b	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
46	CTX	SS	SSp-n	353	Primary somatosensory area, nose	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
47	CTX	SS	SSp-n1	558	Primary somatosensory area, nose, layer 1	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
48	CTX	SS	SSp-n2/3	838	Primary somatosensory area, nose, layer 2/3	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
49	CTX	SS	SSp-n4	654	Primary somatosensory area, nose, layer 4	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
50	CTX	SS	SSp-n5	702	Primary somatosensory area, nose, layer 5	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
51	CTX	SS	SSp-n6a	889	Primary somatosensory area, nose, layer 6a	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
52	CTX	SS	SSp-n6b	929	Primary somatosensory area, nose, layer 6b	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
53	CTX	SS	SSp-bfd	329	Primary somatosensory area, barrel field	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
54	CTX	SS	SSp-bfd1	981	Primary somatosensory area, barrel field, layer 1	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
55	CTX	SS	SSp-bfd2/3	201	Primary somatosensory area, barrel field, layer 2/3	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
56	CTX	SS	SSp-bfd4	1047	Primary somatosensory area, barrel field, layer 4	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0

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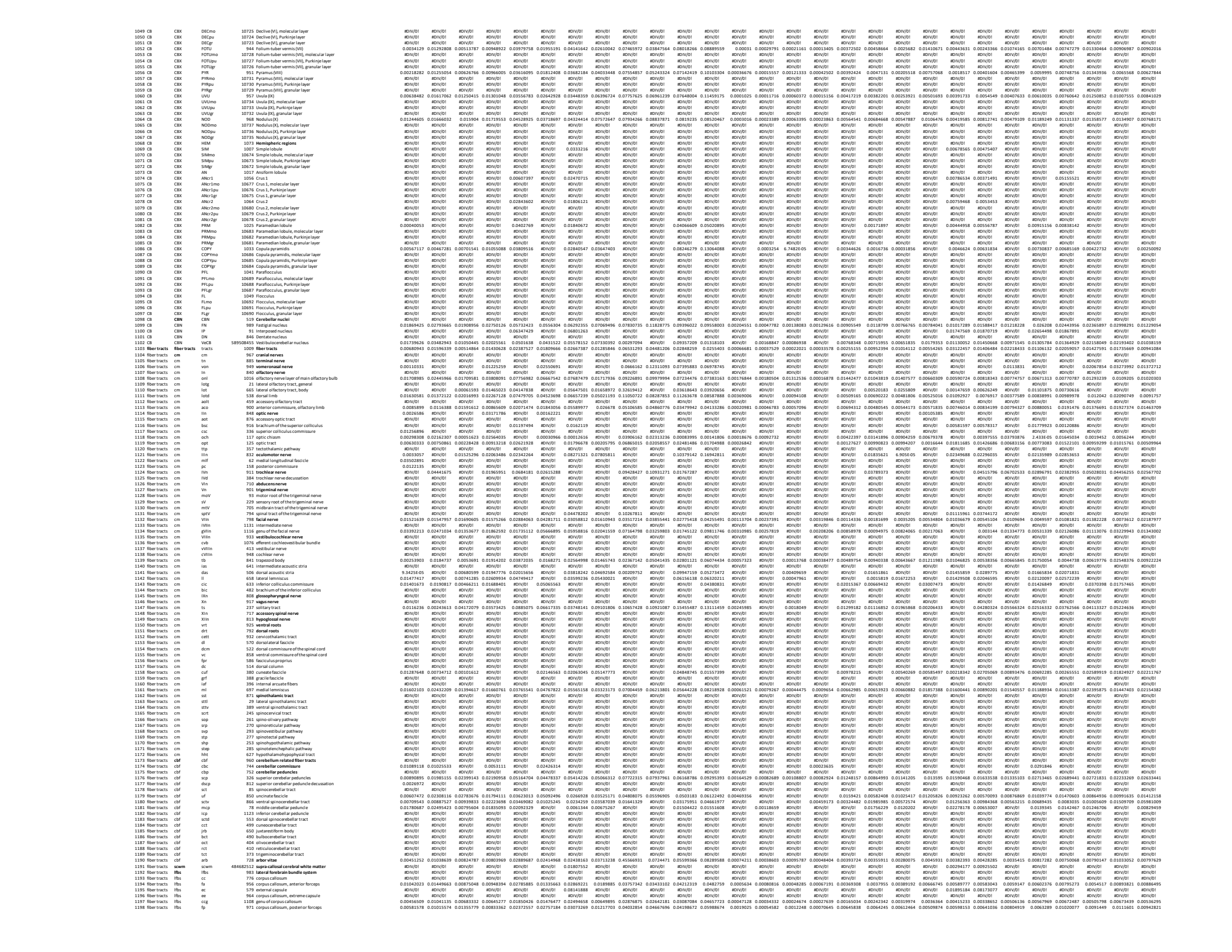

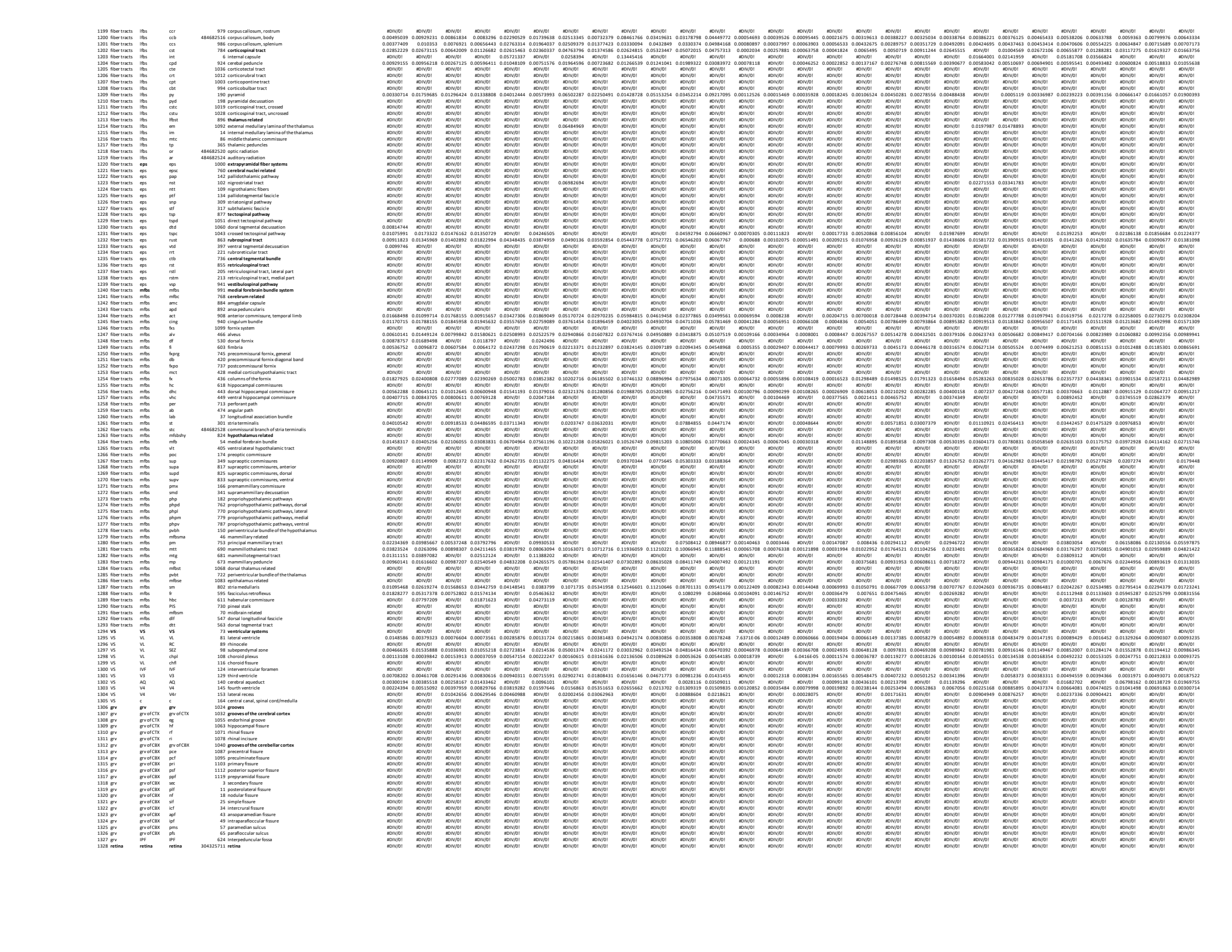

Data Description: Fig. 1G. Cortical area (um^2) measurements obtained by QUINT histology pipeline.

Fig 1G QUINT Cortex Area (um^2)

PPT1-2	PPT1-4	PPT1-7	WT-2	WT-12	WT-18	WT-24
11729022.92	9650739.199	7317861.941	9637327.981	9076107.11	8500859.62	9427393.68
10673248.13	9095788.74	5820827.929	9861700.644	9776299.57	8567608.75	8414632.72
10235267.98	8679729.798	6602814.091	9876331.678	9239695.36	8660516.74	9459888.24
10542618.57	8705776.909	6086102.989	10284619.63	8453046.37	10617600.5	6662549.28

Two-way ANOVA	Ordinary
Alpha	0.05

Source of Variation	% of total variation	P value	P value summary	Significant ?
Biological Replicates	2.262	0.5822	ns	No
Genotype & Age	77.44	<0.0001	****	Yes

ANOVA table	SS (Type III)	DF	MS	F (DFn, DFd)	P value
Biological Replicates	1.26314E+12	3	4.21047E+11	F (3, 18) = 0.	P=0.5822
Genotype & Age	4.32472E+13	6	7.20787E+12	F (6, 18) = 11	P<0.0001
Residual	1.13345E+13	18	6.29696E+11		

Data summary	
Number of columns (Genotype & Age)	7
Number of rows (Biological Replciates)	4
Number of values	28

Tukey's multiple comparisons test	Mean Diff.	95.00% CI of diff.	Below threshold?	Summary	Adjusted P Value
PPT1-2 vs. PPT1-4	1762031	-92113 to 36	No	ns	0.0688
PPT1-2 vs. PPT1-7	4338138	2483994 to 6	Yes	****	<0.0001
PPT1-2 vs. WT-2	880044	-974100 to 2	No	ns	0.7025
PPT1-2 vs. WT-12	1658752	-195391 to 3	No	ns	0.0974
PPT1-2 vs. WT-18	1708393	-145751 to 3	No	ns	0.0826
PPT1-2 vs. WT-24	2303923	449780 to 41	Yes	**	0.0097
PPT1-4 vs. PPT1-7	2576107	721963 to 44	Yes	**	0.0035
PPT1-4 vs. WT-2	-881987	-2736130 to	No	ns	0.7005
PPT1-4 vs. WT-12	-103278	-1957422 to	No	ns	>0.9999
PPT1-4 vs. WT-18	-53638	-1907782 to	No	ns	>0.9999
PPT1-4 vs. WT-24	541893	-1312251 to	No	ns	0.9552
PPT1-7 vs. WT-2	-3458094	-5312237 to	Yes	***	0.0001
PPT1-7 vs. WT-12	-2679385	-4533529 to	Yes	**	0.0024
PPT1-7 vs. WT-18	-2629745	-4483889 to	Yes	**	0.0029
PPT1-7 vs. WT-24	-2034214	-3888358 to	Yes	*	0.0263
WT-2 vs. WT-12	778708	-1075436 to	No	ns	0.8012
WT-2 vs. WT-18	828349	-1025795 to	No	ns	0.7545
WT-2 vs. WT-24	1423879	-430265 to 3	No	ns	0.2035
WT-12 vs. WT-18	49640	-1804504 to	No	ns	>0.9999
WT-12 vs. WT-24	645171	-1208973 to	No	ns	0.9036
WT-18 vs. WT-24	595531	-1258613 to	No	ns	0.9315

Unpaired t tests		
Comparison	WT-2 vs PPT1-2	WT-2 vs WT-24
P value	0.0463	0.0776
P value summary	*	ns
Significantly different	Yes	No
One- or two-tailed P v	Two-tailed	Two-tailed
t, df	t=2.504, df=6	t=2.126, df=6

Data Description: Fig. S1B. Data underlying volcano plots that display lipofuscin load fold-change between PPT1 KOs at 7 versus 2 months of age, annotated by gross brain region.

Row # in Prism	Original Order	Primary Annotation	Secondary Annotation	Tertiary Annotation	Region ID	Region Name	$\log_{10}$(PPT1-7/PPT1-2)	$-\log_{10}$(p-value)	CTX	OLF	HPF	STR	PAL	TH	HY	MB	P	MY	CB	FT	VS
1	9	CTX	FRP	FRP1	68	Frontal pole, layer 1	1.220543244	3.05630542	3.05630542												
2	10	CTX	FRP	FRP2/3	667	Frontal pole, layer 2/3	0.660918331	3.18697498	3.18697498												
3	11	CTX	FRP	FRP5	526157192	Frontal pole, layer 5	0.655898347	2.37715149	2.37715149												
4	12	CTX	FRP	FRP6a	526157196	Frontal pole, layer 6a	1.004731507	0.481259	0.481259												
5	13	CTX	FRP	FRP6b	526322264	Frontal pole, layer 6b	1.15492456	#DIV/0!	#DIV/0!												
6	21	CTX	MO	MOp1	320	Primary motor area, Layer 1	0.86175169	1.70447125	1.70447125												
7	22	CTX	MO	MOp2/3	943	Primary motor area, Layer 2/3	0.459252528	4.51292103	4.51292103												
8	23	CTX	MO	MOp5	648	Primary motor area, Layer 5	0.386132728	3.72623158	3.72623158												
9	24	CTX	MO	MOp6a	844	Primary motor area, Layer 6a	0.62189838	0.5207886	0.5207886												
10	25	CTX	MO	MOp6b	882	Primary motor area, Layer 6b	0.156424448	0.49645655	0.49645655												
11	27	CTX	MO	MOs1	656	Secondary motor area, layer 1	0.863636289	2.60148408	2.60148408												
12	28	CTX	MO	MOs2/3	962	Secondary motor area, layer 2/3	0.49977785	4.38635747	4.38635747												
13	29	CTX	MO	MOs5	767	Secondary motor area, layer 5	0.453967638	2.97122229	2.97122229												
14	30	CTX	MO	MOs6a	1021	Secondary motor area, layer 6a	0.757792213	0.63998206	0.63998206												
15	31	CTX	MO	MOs6b	1085	Secondary motor area, layer 6b	0.269402472	1.18302311	1.18302311												
16	68	CTX	SS	SSp-ll1	1030	Primary somatosensory area, lower limb, layer 1	#DIV/0!	#DIV/0!	#DIV/0!												
17	69	CTX	SS	SSp-ll2/3	113	Primary somatosensory area, lower limb, layer 2/3	0.743498503	#DIV/0!	#DIV/0!												
18	70	CTX	SS	SSp-ll4	1094	Primary somatosensory area, lower limb, layer 4	0.815640228	#DIV/0!	#DIV/0!												
19	71	CTX	SS	SSp-ll5	1128	Primary somatosensory area, lower limb, layer 5	0.548559344	#DIV/0!	#DIV/0!												
20	72	CTX	SS	SSp-ll6a	478	Primary somatosensory area, lower limb, layer 6a	1.024052492	0.42228892	0.42228892												
21	73	CTX	SS	SSp-ll6b	510	Primary somatosensory area, lower limb, layer 6b	0.311381148	0.81678307	0.81678307												
22	89	CTX	SS	SSp-tr1	1006	Primary somatosensory area, trunk, layer 1	0.540502971	1.76041163	1.76041163												
23	90	CTX	SS	SSp-tr2/3	670	Primary somatosensory area, trunk, layer 2/3	0.846014481	0.64774	0.64774												
24	91	CTX	SS	SSp-tr4	1086	Primary somatosensory area, trunk, layer 4	0.341145945	0.65728016	0.65728016												
25	92	CTX	SS	SSp-tr5	1111	Primary somatosensory area, trunk, layer 5	0.490132681	1.09655024	1.09655024												
26	93	CTX	SS	SSp-tr6a	9	Primary somatosensory area, trunk, layer 6a	0.75935093	0.46309527	0.46309527												
27	94	CTX	SS	SSp-tr6b	461	Primary somatosensory area, trunk, layer 6b	0.190416494	0.57047272	0.57047272												
28	174	CTX	VIS	VISam1	281	Anteromedial visual area, layer 1	#DIV/0!	#DIV/0!	#DIV/0!												
29	175	CTX	VIS	VISam2/3	1066	Anteromedial visual area, layer 2/3	#DIV/0!	#DIV/0!	#DIV/0!												
30	176	CTX	VIS	VISam4	401	Anteromedial visual area, layer 4	#DIV/0!	#DIV/0!	#DIV/0!												
31	177	CTX	VIS	VISam5	433	Anteromedial visual area, layer 5	#DIV/0!	#DIV/0!	#DIV/0!												
32	178	CTX	VIS	VISam6a	1046	Anteromedial visual area, layer 6a	#DIV/0!	#DIV/0!	#DIV/0!												
33	179	CTX	VIS	VISam6b	441	Anteromedial visual area, layer 6b	#DIV/0!	#DIV/0!	#DIV/0!												
34	188	CTX	VIS	VISp1	593	Primary visual area, layer 1	#DIV/0!	#DIV/0!	#DIV/0!												
35	189	CTX	VIS	VISp2/3	821	Primary visual area, layer 2/3	#DIV/0!	#DIV/0!	#DIV/0!												
36	190	CTX	VIS	VISp4	721	Primary visual area, layer 4	#DIV/0!	#DIV/0!	#DIV/0!												
37	191	CTX	VIS	VISp5	778	Primary visual area, layer 5	#DIV/0!	#DIV/0!	#DIV/0!												
38	192	CTX	VIS	VISp6a	33	Primary visual area, layer 6a	#DIV/0!	#DIV/0!	#DIV/0!												
39	202	CTX	VIS	VISpm1	805	posteromedial visual area, layer 1	#DIV/0!	#DIV/0!	#DIV/0!												
40	203	CTX	VIS	VISpm2/3	41	posteromedial visual area, layer 2/3	#DIV/0!	#DIV/0!	#DIV/0!												
41	204	CTX	VIS	VISpm4	501	posteromedial visual area, layer 4	#DIV/0!	#DIV/0!	#DIV/0!												
42	205	CTX	VIS	VISpm5	565	posteromedial visual area, layer 5	#DIV/0!	#DIV/0!	#DIV/0!												
43	206	CTX	VIS	VISpm6a	257	posteromedial visual area, layer 6a	#DIV/0!	#DIV/0!	#DIV/0!												
44	207	CTX	VIS	VISpm6b	469	posteromedial visual area, layer 6b	#DIV/0!	#DIV/0!	#DIV/0!												
45	229	CTX	ACA	ACAd1	935	Anterior cingulate area, dorsal part, layer 1	#DIV/0!	#DIV/0!	#DIV/0!												
46	230	CTX	ACA	ACAd2/3	211	Anterior cingulate area, dorsal part, layer 2/3	#DIV/0!	#DIV/0!	#DIV/0!												
47	231	CTX	ACA	ACAd5	1015	Anterior cingulate area, dorsal part, layer 5	0.423027567	2.83028234	2.83028234												
48	232	CTX	ACA	ACAd6a	919	Anterior cingulate area, dorsal part, layer 6a	0.267835458	2.26397666	2.26397666												
49	233	CTX	ACA	ACAd6b	927	Anterior cingulate area, dorsal part, layer 6b	0.248738081	1.13462884	1.13462884												
50	236	CTX	ACA	ACAv2/3	296	Anterior cingulate area, ventral part, layer 2/3	#DIV/0!	#DIV/0!	#DIV/0!												
51	237	CTX	ACA	ACAv5	772	Anterior cingulate area, ventral part, layer 5	0.257298101	2.64200657	2.64200657												
52	238	CTX	ACA	ACAv6a	810	Anterior cingulate area, ventral part, 6a	0.1593011	1.57245701	1.57245701												
53	239	CTX	ACA	ACAv6b	819	Anterior cingulate area, ventral part, 6b	0.157057454	0.75518223	0.75518223												
54	241	CTX	PL	PL1	171	Prelimbic area, layer 1	1.076833843	2.22369385	2.22369385												
55	243	CTX	PL	PL2/3	304	Prelimbic area, layer 2/3	0.591422849	2.52547931	2.52547931												
56	244	CTX	PL	PL5	363	Prelimbic area, layer 5	0.392449074	3.58605383	3.58605383												
57	245	CTX	PL	PL6a	84	Prelimbic area, layer 6a	0.285073831	3.06478719	3.06478719												
58	246	CTX	PL	PL6b	132	Prelimbic area, layer 6b	0.209105213	1.1004819	1.1004819												
59	248	CTX	ILA	ILA1	707	Infralimbic area, layer 1	#DIV/0!	#DIV/0!	#DIV/0!												
60	250	CTX	ILA	ILA2/3	556	Infralimbic area, layer 2/3	#DIV/0!	#DIV/0!	#DIV/0!												
61	251	CTX	ILA	ILA5	827	Infralimbic area, layer 5	0.2395022	1.59041654	1.59041654												
62	252	CTX	ILA	ILA6a	1054	Infralimbic area, layer 6a	0.279289407	1.85815442	1.85815442												
63	253	CTX	ILA	ILA6b	1081	Infralimbic area, layer 6b	0.518055353	1.611706	1.611706												
64	261	CTX	ORB	ORBl1	448	Orbital area, lateral part, layer 1	0.879345171	1.29731248	1.29731248												
65	262	CTX	ORB	ORBl2/3	412	Orbital area, lateral part, layer 2/3	0.392370807	1.28854738	1.28854738												
66	263	CTX	ORB	ORBl5	630	Orbital area, lateral part, layer 5	0.501742038	0.79356141	0.79356141												
67	264	CTX	ORB	ORBl6a	440	Orbital area, lateral part, layer 6a	0.720957321	0.4293894	0.4293894												
68	265	CTX	ORB	ORBl6b	488	Orbital area, lateral part, layer 6b	0.419616643	0.45412057	0.45412057												
69	267	CTX	ORB	ORBm1	484	Orbital area, medial part, layer 1	#DIV/0!	#DIV/0!	#DIV/0!												
70	269	CTX	ORB	ORBm2/3	582	Orbital area, medial part, layer 2/3	0.523757626	1.48881523	1.48881523												
71	270	CTX	ORB	ORBm5	620	Orbital area, medial part, layer 5	0.415753974	2.11239966	2.11239966												
72	271	CTX	ORB	ORBm6a	910	Orbital area, medial part, layer 6a	0.318380562	1.95555769	1.95555769												
73	272	CTX	ORB	ORBm6b	527696977	Orbital area, medial part, layer 6b	0.107845438	0.16410511	0.16410511												
74	275	CTX	ORB	ORBvl1	969	Orbital area, ventrolateral part, layer 1	0.897125161	1.74337699	1.74337699												
75	276	CTX	ORB	ORBvl2/3	288	Orbital area, ventrolateral part, layer 2/3	0.552052765	2.70453406	2.70453406												
76	277	CTX	ORB	ORBvl5	1125	Orbital area, ventrolateral part, layer 5	0.480524791	4.21751106	4.21751106												
77	278	CTX	ORB	ORBvl6a	608	Orbital area, ventrolateral part, layer 6a	0.267007525	1.45293786	1.45293786												
78	279	CTX	ORB	ORBvl6b	680	Orbital area, ventrolateral part, layer 6b	0.17614057	0.63931225	0.63931225												
79	285	CTX	AI	Ald6a	783	Agranular insular area, dorsal part, layer 6a	#DIV/0!	#DIV/0!	#DIV/0!												
80	286	CTX	AI	Ald6b	831	Agranular insular area, dorsal part, layer 6b	#DIV/0!	#DIV/0!	#DIV/0!												
81	301	CTX	RSP	RSPagl1	671	Retrosplenial area, lateral agranular part, layer 1	0.710705656	4.76004601	4.76004601												
82	302	CTX	RSP	RSPagl2/3	965	Retrosplenial area, lateral agranular part, layer 2/3	0.3881005	4.09974382	4.09974382												
83	303	CTX	RSP	RSPagl5	774	Retrosplenial area, lateral agranular part, layer 5	0.405079972	3.08850482	3.08850482												
84	304	CTX	RSP	RSPagl6a	906	Retrosplenial area, lateral agranular part, layer 6a	0.998451842	0.46207724	0.46207724												
85	305	CTX	RSP	RSPagl6b	279	Retrosplenial area, lateral agranular part, layer 6b	0.120136611	0.37859283	0.37859283												
86	328	CTX	RSP	RSPd1	442	Retrosplenial area, dorsal part, layer 1	0.860813836	2.97023497	2.97023497												
87	329	CTX	RSP	RSPd2/3	434	Retrosplenial area, dorsal part, layer 2/3	0.421425054	3.84876971	3.84876971												
88	331	CTX	RSP	RSPd5	610	Retrosplenial area, dorsal part, layer 5	0.415090298	5.51314065	5.51314065												
89	332	CTX	RSP	RSPd6a	274	Retrosplenial area, dorsal part, layer 6a	0.849618823	0.52655212	0.52655212												
90	333	CTX	RSP	RSPd6b	330	Retrosplenial area, dorsal part, layer 6b	0.200375233	1.03968098	1.03968098												
91	335	CTX	RSP	RSPv1	542	Retrosplenial area, ventral part, layer 1	0.687358369	3.60362907	3.60362907												
92	337	CTX	RSP	RSPv2/3	430	Retrosplenial area, ventral part, layer 2/3	0.36780732	2.97471499	2.97471499												
93	338	CTX	RSP	RSPv5	687	Retrosplenial area, ventral part, layer 5	0.44048598	2.92649445	2.92649445												
94	339	CTX	RSP	RSPv6a	590	Retrosplenial area, ventral part, layer 6a	1.125552654	0.44488622	0.44488622												
95	340	CTX	RSP	RSPv6b	622	Retrosplenial area, ventral part, layer 6b	0.314801181	1.92390603	1.92390603												
96	349	CTX	PTLp	VISa1	312782550	Anterior area, layer 1	#DIV/0!	#DIV/0!	#DIV/0!												
97	350	CTX	PTLp	VISa2/3	312782554	Anterior area, layer 2/3	#DIV/0!	#DIV/0!	#DIV/0!												
98	351	CTX	PTLp	VISa4	312782558	Anterior area, layer 4	#DIV/0!	#DIV/0!	#DIV/0!												
99	352	CTX	PTLp	VISa5	312782562	Anterior area, layer 5	#DIV/0!	#DIV/0!	#DIV/0!												
100	353	CTX	PTLp	VISa6a	312782566	Anterior area, layer 6a	#DIV/0!	#DIV/0!	#DIV/0!												
101	354	CTX	PTLp	VISa6b	312782570	Anterior area, layer 6b	#DIV/0!	#DIV/0!	#DIV/0!												
102	381	CTX	OLF	OLF	698	**Olfactory areas**	0.660734399	3.81452788		3.81452788											
103	382	CTX	OLF	MOB	507	Main olfactory bulb	0.745058314	5.37960585		5.37960585											
104	389	CTX	OLF	AOBgl	188	Accessory olfactory bulb, glomerular layer	0.606756352	0.9230789		0.9230789											
105	390	CTX	OLF	AOBgr	196	Accessory olfactory bulb, granular layer	0.834736601	1.9313226		1.9313226											
106	391	CTX	OLF	AOBmi	204	Accessory olfactory bulb, mitral layer	0.596031822	1.33888053		1.33888053											
107	392	CTX	OLF	AON	159	Anterior olfactory nucleus	0.505045563	4.83844467		4.83844467											
108	401	CTX	OLF	TTd	597	Taenia tecta, dorsal part	0.302035947	0.90564099		0.90564099											
109	407	CTX	OLF	TTv	605	Taenia tecta, ventral part	0.480498974	3.42377749		3.42377749											
110	412	CTX	OLF	DP	814	Dorsal peduncular area	0.294331958	1.92354265		1.92354265											
111	418	CTX	OLF	PIR	961	Piriform area	0.313525212	#DIV/0!		#DIV/0!											
112	456	HPF	HPF	HPF	1089	**Hippocampal formation**	0.390330903	3.29099854			3.29099854										
113	459	HPF	CA	CA1	382	Field CA1	0.346794145	3.379744			3.379744										
114	464	HPF	CA	CA2	423	Field CA2	0.256128751	1.94540926			1.94540926										
115	469	HPF	CA	CA3	463	Field CA3	0.185926844	2.38602696			2.38602696										
116	476	HPF	DG	DG-mo	10703	Dentate gyrus, molecular layer	0.790928734	1.1388991			1.1388991										
117	477	HPF	DG	DG-po	10704	Dentate gyrus, polymorph layer	0.230705623	1.7497568			1.7497568										
118	478	HPF	DG	DG-sg	632	Dentate gyrus, granule cell layer	0.659891538	3.30502529			3.30502529										
119	492	HPF	FC	FC	982	Fasciola cinerea	#DIV/0!	#DIV/0!			#DIV/0!										
120	493	HPF	IG	IG	19	Induseum griseum	#DIV/0!	#DIV/0!			#DIV/0!										
121	529	HPF	PAR	POST	1037	Postsubiculum	1.034152447	#DIV/0!			#DIV/0!										
122	537	HPF	SUB	SUB	502	Subiculum	0.272365841	3.58901606			3.58901606										
123	546	HPF	ProS	ProS	484682470	Prosubiculum	0.339156296	1.82725452			1.82725452										
124	561	CTXsp	EP	EPd	952	Endopiriform nucleus, dorsal part	#DIV/0!	#DIV/0!			#DIV/0!										
125	573	CNU	STR	STR	477	**Striatum**	0.539183325	4.3023086				4.3023086									
126	575	CNU	CP	CP	672	Caudoputamen	0.574798348	2.26053437				2.26053437									
127	577	CNU	ACB	ACB	56	Nucleus accumbens	1.591930595	0.45073335				0.45073335									
128	578	CNU	FS	FS	998	Fundus of striatum	#DIV/0!	#DIV/0!				#DIV/0!									
129	579	CNU	OT	OT	754	Olfactory tubercle	0.65809567	2.28618462				2.28618462									
130	589	CNU	LSX	LSc	250	Lateral septal nucleus, caudal (caudodorsal) part	0.432213584	1.07739454				1.07739454									
131	590	CNU	LSX	LSr	258	Lateral septal nucleus, rostral (rostroventral) part	0.563662424	3.59752793				3.59752793									
132	591	CNU	LSX	LSv	266	Lateral septal nucleus, ventral part	0.55460891	4.06687399				4.06687399									
133	592	CNU	LSX	SF	310	Septofimbrial nucleus	0.624868862	1.87396675				1.87396675									
134	593	CNU	LSX	SH	333	Septohippocampal nucleus	#DIV/0!	#DIV/0!				#DIV/0!									
135	595	CNU	sAMY	AAA	23	Anterior amygdalar area	#DIV/0!	#DIV/0!				#DIV/0!									
136	602	CNU	sAMY	MEA	403	Medial amygdalar nucleus	#DIV/0!	#DIV/0!				#DIV/0!									
137	610	CNU	PAL	PAL	803	**Pallidum**	0.484837061	1.83424609					1.83424609								
138	612	CNU	PALd	GPe	1022	Globus pallidus, external segment	#DIV/0!	#DIV/0!					#DIV/0!								
139	615	CNU	PALv	SI	342	Substantia innominata	0.693145618	1.0543981					1.0543981								
140	616	CNU	PALv	MA	298	Magnocellular nucleus	0.497523932	1.37586842					1.37586842								
141	619	CNU	PALm	MS	564	Medial septal nucleus	#DIV/0!	#DIV/0!					#DIV/0!								
142	620	CNU	PALm	NDB	596	Diagonal band nucleus	0.47328537	2.26238384					2.26238384								
143	621	CNU	PALm	TRS	581	Triangular nucleus of septum	0.543300282	3.39086539					3.39086539								
144	623	CNU	PALc	BST	351	Bed nuclei of the stria terminalis	0.446737529	2.95790088					2.95790088								
145	640	CNU	PALc	BAC	287	Bed nucleus of the anterior commissure	0.321213145	0.78264739					0.78264739								

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296	922	HB	P-mot	P5	549009215	Peritrigeminal zone	0.655176014	1.55206272	1.55206272					
297	923	HB	P-mot	Acs5	549009219	Accessory trigeminal nucleus	0.521525889	0.56252542	0.56252542					
298	924	HB	P-mot	PC5	549009223	Parvicellular motor 5 nucleus	#DIV/0!	#DIV/0!	#DIV/0!					
299	927	HB	P-sat	CS	679	Superior central nucleus raphe	#DIV/0!	#DIV/0!	#DIV/0!					
300	930	HB	P-sat	LC	147	Locus ceruleus	0.366127996	1.11941483	1.11941483					
301	931	HB	P-sat	LDT	162	Laterodorsal tegmental nucleus	0.535249234	1.68801784	1.68801784					
302	932	HB	P-sat	NI	604	Nucleus incertus	0.641995523	3.00933499	3.00933499					
303	933	HB	P-sat	PRNr	146	Pontine reticular nucleus	0.589111935	5.38535025	5.38535025					
304	934	HB	P-sat	RPO	238	Nucleus raphe pontis	#DIV/0!	#DIV/0!	#DIV/0!					
305	935	HB	P-sat	SLC	350	Subceruleus nucleus	0.570121763	2.4452201	2.4452201					
306	936	HB	P-sat	SLD	358	Sublaterodorsal nucleus	0.512811591	2.89205942	2.89205942					
307	937	HB	**MY**	MY	354	**Medulla**	0.506303255	4.53948334		4.53948334				
308	939	HB	MY-sen	AP	207	Area postrema	#DIV/0!	#DIV/0!		#DIV/0!				
309	946	HB	MY-sen	CU	711	Cuneate nucleus	0.403032653	2.40901601		2.40901601				
310	947	HB	MY-sen	GR	1039	Gracile nucleus	-0.15187087	0.14263803		0.14263803				
311	948	HB	MY-sen	ECU	903	External cuneate nucleus	0.656124662	0.51087124		0.51087124				
312	949	HB	MY-sen	NTB	642	Nucleus of the trapezoid body	0.574067374	3.82351617		3.82351617				
313	950	HB	MY-sen	NTS	651	Nucleus of the solitary tract	0.748217688	5.12081842		5.12081842				
314	956	HB	MY-sen	SPVC	429	Spinal nucleus of the trigeminal, caudal part	0.856543513	2.54138546		2.54138546				
315	957	HB	MY-sen	SPVI	437	Spinal nucleus of the trigeminal, interpolar part	#DIV/0!	#DIV/0!		#DIV/0!				
316	958	HB	MY-sen	SPVO	445	Spinal nucleus of the trigeminal, oral part	#DIV/0!	#DIV/0!		#DIV/0!				
317	964	HB	MY-sen	Pa5	589508451	Paratrigeminal nucleus	#DIV/0!	#DIV/0!		#DIV/0!				
318	967	HB	MY-mot	VI	653	Abducens nucleus	0.488393491	2.57123188		2.57123188				
319	969	HB	MY-mot	VII	661	Facial motor nucleus	0.45329896	2.43326658		2.43326658				
320	970	HB	MY-mot	ACVII	576	Accessory facial motor nucleus	0.251538663	#DIV/0!		#DIV/0!				
321	973	HB	MY-mot	AMBd	939	Nucleus ambiguus, dorsal division	#DIV/0!	#DIV/0!		#DIV/0!				
322	974	HB	MY-mot	AMBv	143	Nucleus ambiguus, ventral division	#DIV/0!	#DIV/0!		#DIV/0!				
323	975	HB	MY-mot	DMX	839	Dorsal motor nucleus of the vagus nerve	0.648630289	2.26892871		2.26892871				
324	977	HB	MY-mot	GRN	1048	Gigantocellular reticular nucleus	0.525301322	4.41558792		4.41558792				
325	978	HB	MY-mot	ICB	372	Infracerebellar nucleus	#DIV/0!	#DIV/0!		#DIV/0!				
326	979	HB	MY-mot	IO	83	Inferior olivary complex	0.357639453	2.64854446		2.64854446				
327	980	HB	MY-mot	IRN	136	Intermediate reticular nucleus	0.849654943	0.72661078		0.72661078				
328	981	HB	MY-mot	ISN	106	Inferior salivatory nucleus	#DIV/0!	#DIV/0!		#DIV/0!				
329	982	HB	MY-mot	LIN	203	Linear nucleus of the medulla	0.474293275	2.01294918		2.01294918				
330	984	HB	MY-mot	LRNm	955	Lateral reticular nucleus, magnocellular part	0.507082958	1.91229923		1.91229923				
331	986	HB	MY-mot	MARN	307	Magnocellular reticular nucleus	0.455588797	1.90986276		1.90986276				
332	988	HB	MY-mot	MDRNd	1098	Medullary reticular nucleus, dorsal part	0.524952343	2.91076949		2.91076949				
333	989	HB	MY-mot	MDRNv	1107	Medullary reticular nucleus, ventral part	0.576719176	3.50196814		3.50196814				
334	990	HB	MY-mot	PARN	852	Parvicellular reticular nucleus	0.556347341	3.28354572		3.28354572				
335	991	HB	MY-mot	PAS	859	Parasolitary nucleus	0.750571386	3.26559998		3.26559998				
336	993	HB	MY-mot	PGRNd	970	Paragigantocellular reticular nucleus, dorsal part	0.454879352	3.35763688		3.35763688				
337	994	HB	MY-mot	PGRNl	978	Paragigantocellular reticular nucleus, lateral part	0.490213372	4.1769535		4.1769535				
338	997	HB	MY-mot	NR	177	Nucleus of Roller	#DIV/0!	#DIV/0!		#DIV/0!				
339	998	HB	MY-mot	PRP	169	Nucleus prepositus	0.546373287	#DIV/0!		#DIV/0!				
340	1000	HB	MY-mot	PPY	1069	Parapyramidal nucleus	0.406487946	2.42190919		2.42190919				
341	1004	HB	MY-mot	LAV	209	Lateral vestibular nucleus	#DIV/0!	#DIV/0!		#DIV/0!				
342	1005	HB	MY-mot	MV	202	Medial vestibular nucleus	0.608586119	5.23200112		5.23200112				
343	1006	HB	MY-mot	SPIV	225	Spinal vestibular nucleus	0.594864064	1.44173638		1.44173638				
344	1007	HB	MY-mot	SUV	217	Superior vestibular nucleus	0.594644664	0.79413812		0.79413812				
345	1008	HB	MY-mot	x	765	Nucleus x	#DIV/0!	#DIV/0!		#DIV/0!				
346	1009	HB	MY-mot	XII	773	Hypoglossal nucleus	#DIV/0!	#DIV/0!		#DIV/0!				
347	1016	**CB**	**CB**	CB	512	**Cerebellum**	0.44076155	2.9871961			2.9871961			
348	1022	CB	CBX	LING	912	Lingula (I)	0.466737477	1.16900568			1.16900568			
349	1027	CB	CBX	CENT2	976	Lobule II	0.692865515	6.42329668			6.42329668			
350	1031	CB	CBX	CENT3	984	Lobule III	0.749537309	3.31420148			3.31420148			
351	1044	CB	CBX	CUL4	1091	Lobules IV-V	0.908851608	4.16630709			4.16630709			
352	1048	CB	CBX	DEC	936	Declive (VI)	0.930507014	2.82827783			2.82827783			
353	1052	CB	CBX	FOTU	944	Folium-tuber vermis (VII)	0.959663859	2.02524385			2.02524385			
354	1056	CB	CBX	PYR	951	Pyramus (VIII)	0.991169134	2.27697729			2.27697729			
355	1060	CB	CBX	UVU	957	Uvula (IX)	0.84737648	2.33475123			2.33475123			
356	1064	CB	CBX	NOD	968	Nodulus (X)	0.731018139	5.79131042			5.79131042			
357	1069	CB	CBX	SIM	1007	Simple lobule	#DIV/0!	#DIV/0!			#DIV/0!			
358	1074	CB	CBX	ANcr1	1056	Crus 1	#DIV/0!	#DIV/0!			#DIV/0!			
359	1078	CB	CBX	ANcr2	1064	Crus 2	#DIV/0!	#DIV/0!			#DIV/0!			
360	1082	CB	CBX	PRM	1025	Paramedian lobule	2.054778205	#DIV/0!			#DIV/0!			
361	1086	CB	CBX	COPY	1033	Copula pyramidis	1.183856849	0.82324119			0.82324119			
362	1099	CB	CBN	FN	989	Fastigial nucleus	0.617222426	2.76684961			2.76684961			
363	1100	CB	CBN	IP	91	Interposed nucleus	#DIV/0!	#DIV/0!			#DIV/0!			
364	1102	CB	CBN	VeCB	589508455	Vestibulocerebellar nucleus	0.246237056	0.19506968			0.19506968			
365	1103	**fiber tracts**	**fiber tracts**	tracts	1009	**fiber tracts**	0.589637461	1.40382152				1.40382152		
366	1106	fiber tracts	cm	von	949	**vomeronasal nerve**	1.096357994	2.15345152				2.15345152		
367	1108	fiber tracts	cm	onl	1016	olfactory nerve layer of main olfactory bulb	0.543687417	3.25671061				3.25671061		
368	1110	fiber tracts	cm	lot	665	lateral olfactory tract, body	1.243958813	0.49548642				0.49548642		
369	1111	fiber tracts	cm	lotd	538	dorsal limb	0.730638567	2.87264527				2.87264527		
370	1113	fiber tracts	cm	aco	900	anterior commissure, olfactory limb	0.593746592	3.00347534				3.00347534		
371	1114	fiber tracts	cm	lln	848	**optic nerve**	#DIV/0!	#DIV/0!				#DIV/0!		
372	1116	fiber tracts	cm	bsc	916	brachium of the superior colliculus	#DIV/0!	#DIV/0!				#DIV/0!		
373	1117	fiber tracts	cm	csc	336	superior colliculus commissure	#DIV/0!	#DIV/0!				#DIV/0!		
374	1118	fiber tracts	cm	och	117	optic chiasm	0.103691321	0.11226107				0.11226107		
375	1119	fiber tracts	cm	opt	125	optic tract	0.715714666	0.93934822				0.93934822		
376	1121	fiber tracts	cm	IIIn	832	**oculomotor nerve**	1.01938877	0.80133056				0.80133056		
377	1122	fiber tracts	cm	mlf	62	medial longitudinal fascicle	#DIV/0!	#DIV/0!				#DIV/0!		
378	1123	fiber tracts	cm	pc	158	posterior commissure	#DIV/0!	#DIV/0!				#DIV/0!		
379	1124	fiber tracts	cm	IVn	911	**trochlear nerve**	0.362133809	0.55023803				0.55023803		
380	1131	fiber tracts	cm	spIV	794	spinal tract of the trigeminal nerve	#DIV/0!	#DIV/0!				#DIV/0!		
381	1132	fiber tracts	cm	VIIn	798	**facial nerve**	0.356691249	2.14522515				2.14522515		
382	1134	fiber tracts	cm	gVIIn	1116	genu of the facial nerve	0.383994029	0.75267828				0.75267828		
383	1139	fiber tracts	cm	tb	841	trapezoid body	0.553525684	1.43013044				1.43013044		
384	1141	fiber tracts	cm	das	506	dorsal acoustic stria	0.767148444	0.57438936				0.57438936		
385	1142	fiber tracts	cm	ll	658	lateral lemniscus	0.588354221	1.91794573				1.91794573		
386	1143	fiber tracts	cm	cic	633	inferior colliculus commissure	0.506069722	#DIV/0!				#DIV/0!		
387	1147	fiber tracts	cm	ts	237	solitary tract	0.738740428	3.32327408				3.32327408		
388	1158	fiber tracts	cm	cuf	380	cuneate fascicle	0.655539218	0.4399104				0.4399104		
389	1161	fiber tracts	cm	ml	697	medial lemniscus	0.58204412	2.92482215				2.92482215		
390	1174	fiber tracts	cbf	cbc	744	**cerebellar commissure**	#DIV/0!	#DIV/0!				#DIV/0!		
391	1176	fiber tracts	cbf	scp	326	superior cerebelar peduncles	0.620005046	3.15540263				3.15540263		
392	1177	fiber tracts	cbf	dscp	812	superior cerebellar peduncle decussation	#DIV/0!	#DIV/0!				#DIV/0!		
393	1179	fiber tracts	cbf	uf	850	uncinate fascicle	0.458957207	2.86656664				2.86656664		
394	1180	fiber tracts	cbf	sctv	866	ventral spinocerebellar tract	0.42405125	0.85701045				0.85701045		
395	1181	fiber tracts	cbf	mcp	78	middle cerebellar peduncle	-0.05308962	0.21417442				0.21417442		
396	1190	fiber tracts	cbf	arb	728	**arbor vitae**	1.33016341	0.70344593				0.70344593		
397	1191	fiber tracts	**scwm**	scwm	484682512	**supra-callosal cerebral white matter**	#DIV/0!	#DIV/0!				#DIV/0!		
398	1194	fiber tracts	lfbs	fa	956	corpus callosum, anterior forceps	0.57533449	3.10977863				3.10977863		
399	1195	fiber tracts	lfbs	ec	579	external capsule	#DIV/0!	#DIV/0!				#DIV/0!		
400	1197	fiber tracts	lfbs	ccg	1108	genu of corpus callosum	0.671458933	2.08852424				2.08852424		
401	1198	fiber tracts	lfbs	fp	971	corpus callosum, posterior forceps	0.697969377	2.78332884				2.78332884		
402	1200	fiber tracts	lfbs	ccb	484682516	corpus callosum, body	0.796232075	1.3579784				1.3579784		
403	1201	fiber tracts	lfbs	ccs	986	corpus callosum, splenium	0.749597574	2.64037506				2.64037506		
404	1202	fiber tracts	lfbs	cst	784	**corticospinal tract**	0.386905063	1.70319342				1.70319342		
405	1203	fiber tracts	lfbs	int	6	internal capsule	#DIV/0!	#DIV/0!				#DIV/0!		
406	1204	fiber tracts	lfbs	cpd	924	cerebal peduncle	0.440558837	1.20892109				1.20892109		
407	1209	fiber tracts	lfbs	py	190	pyramid	0.609999997	0.94341592				0.94341592		
408	1214	fiber tracts	lfbs	em	1092	external medullary lamina of the thalamus	#DIV/0!	#DIV/0!				#DIV/0!		
409	1223	fiber tracts	eps	nst	102	nigrostriatal tract	#DIV/0!	#DIV/0!				#DIV/0!		
410	1230	fiber tracts	eps	dtd	1060	doral tegmental decussation	#DIV/0!	#DIV/0!				#DIV/0!		
411	1231	fiber tracts	eps	tspc	1043	crossed tectospinal pathway	0.601348911	0.83036029				0.83036029		
412	1232	fiber tracts	eps	rust	863	**rubrospinal tract**	0.668921425	3.3622523				3.3622523		
413	1233	fiber tracts	eps	vtd	397	ventral tegmental decussation	#DIV/0!	#DIV/0!				#DIV/0!		
414	1244	fiber tracts	mfbs	act	908	anterior commissure, temporal limb	0.480444215	1.47980977				1.47980977		
415	1245	fiber tracts	mfbs	cing	940	cingulum bundle	0.459502766	2.99953287				2.99953287		
416	1247	fiber tracts	mfbs	alv	466	alveus	0.589299198	2.83425527				2.83425527		
417	1248	fiber tracts	mfbs	df	530	dorsal fornix	#DIV/0!	#DIV/0!				#DIV/0!		
418	1249	fiber tracts	mfbs	fi	603	fimbria	0.692322165	1.89864787				1.89864787		
419	1254	fiber tracts	mfbs	fx	436	columns of the fornix	0.579600131	2.96870159				2.96870159		
420	1256	fiber tracts	mfbs	dhc	443	dorsal hippocampal commissure	0.711515213	1.53657301				1.53657301		
421	1257	fiber tracts	mfbs	vhc	449	ventral hippocampal commissure	0.827004829	#DIV/0!				#DIV/0!		
422	1261	fiber tracts	mfbs	st	301	stria terminalis	0.294138818	0.54847789				0.54847789		
423	1264	fiber tracts	mfbs	mfb	54	medial forebrain bundle	0.620081122	4.3801272				4.3801272		
424	1267	fiber tracts	mfbs	sup	349	supraoptic commissures	0.691543535	1.53351588				1.53351588		
425	1280	fiber tracts	mfbs	pm	753	principal mammillary tract	0.494079761	1.96871515				1.96871515		
426	1281	fiber tracts	mfbs	mtt	690	mammillothalamic tract	0.591075795	3.62988105				3.62988105		
427	1282	fiber tracts	mfbs	mtg	681	mammillotegmental tract	#DIV/0!	#DIV/0!				#DIV/0!		
428	1283	fiber tracts	mfbs	mp	673	mammillary peduncle	0.667012717	2.01907551				2.01907551		
429	1287	fiber tracts	mfbs	sm	802	stria medullaris	0.682421793	3.3632687				3.3632687		
430	1288	fiber tracts	mfbs	fr	595	fasciculus retroflexus	0.570262589	0.86214311				0.86214311		
431	1289	fiber tracts	mfbs	hbc	611	habenular commissure	#DIV/0!	#DIV/0!				#DIV/0!		
432	1295	VS	VL	VL	81	lateral ventricle	0.508902942	0.40380709						
433	1297	VS	VL	SEZ	98	subependymal zone	0.638504621	1.76150196						
434	1298	VS	VL	chpl	108	choroid plexus	1.046051214	0.83420539						
435	1301	VS	V3	V3	129	third ventricle	0.581334504	0.82321525						
436	1302	VS	AQ	AQ	140	cerebral aqueduct	0.503597317	0.24681742						
437	1303	VS	V4	V4	145	fourth ventricle	0.587638546	1.88226845						
438	1304	VS	V4	V4r	153	lateral recess	0.264530065	0.33090897						

Data Description: Fig. S1C. Data underlying volcano plots that display lipofuscin load fold-change between WT mice at 24 versus 12 months of age, annotated by gross brain region.

Row # in Pri	Original Order	Primary Annotation	Secondary Annotation	Tertiary Annotation	Region ID	Region Names	log10(WT-24/WT-12)	-log10(p-value)	CTX	OLF	HPF	STR	PAL	TH	HY	MB	P	MY	CB	FT	VS
1	9	CTX	FRP	FRP1	68	Frontal pole, layer 1	0.25212446	1.02511343	1.02511343												
2	10	CTX	FRP	FRP2/3	667	Frontal pole, layer 2/3	0.3111689	1.71471102	1.71471102												
3	11	CTX	FRP	FRP5	526157182	Frontal pole, layer 5	0.29264979	1.54587813	1.54587813												
4	12	CTX	FRP	FRP6a	526157196	Frontal pole, layer 6a	0.36237006	0.4758623	0.4758623												
5	13	CTX	FRP	FRP6b	526322264	Frontal pole, layer 6b	0.66737587														
6	21	CTX	MO	MOp1	320	Primary motor area, Layer 1	0.01811159	0.86720562	0.86720562												
7	22	CTX	MO	MOp2/3	943	Primary motor area, Layer 2/3	0.23994636	1.83734319	1.83734319												
8	23	CTX	MO	MOp5	648	Primary motor area, Layer 5	0.18814621	1.76945132	1.76945132												
9	24	CTX	MO	MOp6a	844	Primary motor area, Layer 6a	0.16996782	0.48271325	0.48271325												
10	25	CTX	MO	MOp6b	882	Primary motor area, Layer 6b	0.08213347	0.53767159	0.53767159												
11	27	CTX	MO	MOs1	656	Secondary motor area, layer 1	0.09969125	1.11466047	1.11466047												
12	28	CTX	MO	MOs2/3	962	Secondary motor area, layer 2/3	0.2683841	1.88069525	1.88069525												
13	29	CTX	MO	MOs5	767	Secondary motor area, layer 5	0.24824887	1.6263433	1.6263433												
14	30	CTX	MO	MOs6a	1021	Secondary motor area, layer 6a	0.27368249	0.63141074	0.63141074												
15	31	CTX	MO	MOs6b	1085	Secondary motor area, layer 6b	0.29414284	1.27267088	1.27267088												
16	68	CTX	SS	SSp-tl1	1030	Primary somatosensory area, lower limb, layer 1	0.24708052	1.33414017	1.33414017												
17	69	CTX	SS	SSp-ll2/3	113	Primary somatosensory area, lower limb, layer 2/3	0.30411485	0.45321871	0.45321871												
18	70	CTX	SS	SSp-ll4	1094	Primary somatosensory area, lower limb, layer 4	0.86043764	0.50006591	0.50006591												
19	71	CTX	SS	SSp-ll5	1128	Primary somatosensory area, lower limb, layer 5	0.28385969	1.39559488	1.39559488												
20	72	CTX	SS	SSp-ll6a	478	Primary somatosensory area, lower limb, layer 6a	0.31559356	0.40787979	0.40787979												
21	73	CTX	SS	SSp-ll6b	510	Primary somatosensory area, lower limb, layer 6b	1.09403356	0.18919638	0.18919638												
22	89	CTX	SS	SSp-tr1	1006	Primary somatosensory area, trunk, layer 1	0.64775651	0.92972486	0.92972486												
23	90	CTX	SS	SSp-tr2/3	670	Primary somatosensory area, trunk, layer 2/3	0.60633931	0.53732824	0.53732824												
24	91	CTX	SS	SSp-tr4	1086	Primary somatosensory area, trunk, layer 4	0.55512692	1.05005206	1.05005206												
25	92	CTX	SS	SSp-tr5	1111	Primary somatosensory area, trunk, layer 5	0.39077966	0.75061134	0.75061134												
26	93	CTX	SS	SSp-tr6a	9	Primary somatosensory area, trunk, layer 6a	0.24275411	0.4400592	0.4400592												
27	94	CTX	SS	SSp-tr6b	461	Primary somatosensory area, trunk, layer 6b	0.19859594	0.03139129	0.03139129												
28	174	CTX	VIS	VISam1	281	Anteromedial visual area, layer 1		1.76101902	1.76101902												
29	175	CTX	VIS	VISam2/3	1066	Anteromedial visual area, layer 2/3		0.43637617	0.43637617												
30	176	CTX	VIS	VISam4	401	Anteromedial visual area, layer 4		0.34160386	0.34160386												
31	177	CTX	VIS	VISam5	433	Anteromedial visual area, layer 5		0.60956007	0.60956007												
32	178	CTX	VIS	VISam6a	1046	Anteromedial visual area, layer 6a		0.35436536	0.35436536												
33	179	CTX	VIS	VISam6b	441	Anteromedial visual area, layer 6b															
34	188	CTX	VIS	VISp1	593	Primary visual area, layer 1		0.39100433	0.39100433												
35	189	CTX	VIS	VISp2/3	821	Primary visual area, layer 2/3		0.32837348	0.32837348												
36	190	CTX	VIS	VISp4	721	Primary visual area, layer 4															
37	191	CTX	VIS	VISp5	778	Primary visual area, layer 5															
38	192	CTX	VIS	VISp6a	33	Primary visual area, layer 6a															
39	202	CTX	VIS	VISpm1	805	posteromedial visual area, layer 1		1.11189247	1.11189247												
40	203	CTX	VIS	VISpm2/3	41	posteromedial visual area, layer 2/3		0.56299411	0.56299411												
41	204	CTX	VIS	VISpm4	501	posteromedial visual area, layer 4		0.33261984	0.33261984												
42	205	CTX	VIS	VISpm5	565	posteromedial visual area, layer 5		0.40381292	0.40381292												
43	206	CTX	VIS	VISpm6a	257	posteromedial visual area, layer 6a		0.36601753	0.36601753												
44	207	CTX	VIS	VISpm6b	469	posteromedial visual area, layer 6b															
45	229	CTX	ACA	ACAd1	935	Anterior cingulate area, dorsal part, layer 1															
46	230	CTX	ACA	ACAd2/3	211	Anterior cingulate area, dorsal part, layer 2/3															
47	231	CTX	ACA	ACAd5	1015	Anterior cingulate area, dorsal part, layer 5	0.32949666	2.68236907	2.68236907												
48	232	CTX	ACA	ACAd6a	919	Anterior cingulate area, dorsal part, layer 6a	0.26139793	2.49702476	2.49702476												
49	233	CTX	ACA	ACAd6b	927	Anterior cingulate area, dorsal part, layer 6b	0.0639411	1.37979944	1.37979944												
50	236	CTX	ACA	ACAv2/3	296	Anterior cingulate area, ventral part, layer 2/3															
51	237	CTX	ACA	ACAv5	772	Anterior cingulate area, ventral part, layer 5	0.27722864														
52	238	CTX	ACA	ACAv6a	810	Anterior cingulate area, ventral part, 6a	0.29846102	2.75376982	2.75376982												
53	239	CTX	ACA	ACAv6b	819	Anterior cingulate area, ventral part, 6b	0.23193443	1.44400246	1.44400246												
54	241	CTX	PL	PL1	171	Prelimbic area, layer 1	0.14048492	0.97052801	0.97052801												
55	243	CTX	PL	PL2/3	304	Prelimbic area, layer 2/3	0.42249403	2.6477618	2.6477618												
56	244	CTX	PL	PL5	363	Prelimbic area, layer 5	0.27017049	3.85069699	3.85069699												
57	245	CTX	PL	PL6a	84	Prelimbic area, layer 6a	0.28864232	2.41085918	2.41085918												
58	246	CTX	PL	PL6b	132	Prelimbic area, layer 6b	0.06557864	1.44457488	1.44457488												
59	248	CTX	ILA	ILA1	707	Infralimbic area, layer 1															
60	250	CTX	ILA	ILA2/3	556	Infralimbic area, layer 2/3															
61	251	CTX	ILA	ILA5	827	Infralimbic area, layer 5	0.24260146														
62	252	CTX	ILA	ILA6a	1054	Infralimbic area, layer 6a	0.15501685	1.20774821	1.20774821												
63	253	CTX	ILA	ILA6b	1081	Infralimbic area, layer 6b	0.35110302	0.78409609	0.78409609												
64	261	CTX	ORB	ORBl1	448	Orbital area, lateral part, layer 1	0.50734122	1.02646666	1.02646666												
65	262	CTX	ORB	ORBl2/3	412	Orbital area, lateral part, layer 2/3	0.53370528	2.06036568	2.06036568												
66	263	CTX	ORB	ORBl5	630	Orbital area, lateral part, layer 5	0.64608151	0.72271108	0.72271108												
67	264	CTX	ORB	ORBl6a	440	Orbital area, lateral part, layer 6a	0.37538771	0.48608414	0.48608414												
68	265	CTX	ORB	ORBl6b	488	Orbital area, lateral part, layer 6b	0.21920888	2.96972529	2.96972529												
69	267	CTX	ORB	ORBm1	484	Orbital area, medial part, layer 1	0.54353023														
70	269	CTX	ORB	ORBm2/3	582	Orbital area, medial part, layer 2/3	0.31878819	1.22960389	1.22960389												
71	270	CTX	ORB	ORBm5	620	Orbital area, medial part, layer 5	0.31348786	2.41344225	2.41344225												
72	271	CTX	ORB	ORBm6a	910	Orbital area, medial part, layer 6a	0.33144755	4.53614408	4.53614408												
73	272	CTX	ORB	ORBm6b	527696977	Orbital area, medial part, layer 6b	0.15447481	1.18378624	1.18378624												
74	275	CTX	ORB	ORBvl1	969	Orbital area, ventrolateral part, layer 1	0.48182495	1.25815108	1.25815108												
75	276	CTX	ORB	ORBvl2/3	288	Orbital area, ventrolateral part, layer 2/3	0.39860837	2.10961696	2.10961696												
76	277	CTX	ORB	ORBvl5	1125	Orbital area, ventrolateral part, layer 5	0.39883309	2.19397608	2.19397608												
77	278	CTX	ORB	ORBvl6a	608	Orbital area, ventrolateral part, layer 6a	0.39642597	2.3566151	2.3566151												
78	279	CTX	ORB	ORBvl6b	680	Orbital area, ventrolateral part, layer 6b	0.21644556	2.28479831	2.28479831												
79	285	CTX	AI	AId6a	783	Agranular insular area, dorsal part, layer 6a															
80	286	CTX	AI	AId6b	831	Agranular insular area, dorsal part, layer 6b															
81	301	CTX	RSP	RSPagl1	671	Retrosplenial area, lateral agranular part, layer 1	0.32574639	1.61971952	1.61971952												
82	302	CTX	RSP	RSPagl2/3	965	Retrosplenial area, lateral agranular part, layer 2/3	0.29866082	2.90615104	2.90615104												
83	303	CTX	RSP	RSPagl5	774	Retrosplenial area, lateral agranular part, layer 5	0.23140865	1.90998221	1.90998221												
84	304	CTX	RSP	RSPagl6a	906	Retrosplenial area, lateral agranular part, layer 6a	0.17942274	0.45974163	0.45974163												
85	305	CTX	RSP	RSPagl6b	279	Retrosplenial area, lateral agranular part, layer 6b	0.20997802	0.40366159	0.40366159												
86	328	CTX	RSP	RSPd1	442	Retrosplenial area, dorsal part, layer 1	0.28324312	1.67700237	1.67700237												
87	329	CTX	RSP	RSPd2/3	434	Retrosplenial area, dorsal part, layer 2/3	0.32792139	2.43360025	2.43360025												
88	331	CTX	RSP	RSPd5	610	Retrosplenial area, dorsal part, layer 5	0.34628413	2.60418724	2.60418724												
89	332	CTX	RSP	RSPd6a	274	Retrosplenial area, dorsal part, layer 6a	0.34908179	0.55657256	0.55657256												
90	333	CTX	RSP	RSPd6b	330	Retrosplenial area, dorsal part, layer 6b	0.31388915	1.31575266	1.31575266												
91	335	CTX	RSP	RSPv1	542	Retrosplenial area, ventral part, layer 1	0.60234605	2.60302576	2.60302576												
92	337	CTX	RSP	RSPv2/3	430	Retrosplenial area, ventral part, layer 2/3	0.57949724	5.32668972	5.32668972												
93	338	CTX	RSP	RSPv5	687	Retrosplenial area, ventral part, layer 5	0.39598818	2.60417026	2.60417026												
94	339	CTX	RSP	RSPv6a	590	Retrosplenial area, ventral part, layer 6a	0.46623386	0.46983329	0.46983329												
95	340	CTX	RSP	RSPv6b	622	Retrosplenial area, ventral part, layer 6b	0.37724841	2.58845425	2.58845425												
96	349	CTX	PTLp	VISa1	312782550	Anterior area, layer 1		1.33554063	1.33554063												
97	350	CTX	PTLp	VISa2/3	312782554	Anterior area, layer 2/3		0.43511546	0.43511546												
98	351	CTX	PTLp	VISa4	312782558	Anterior area, layer 4		0.32160062	0.32160062												
99	352	CTX	PTLp	VISa5	312782562	Anterior area, layer 5		0.79471518	0.79471518												
100	353	CTX	PTLp	VISa6a	312782566	Anterior area, layer 6a	0.37695576	0.33704497	0.33704497												
101	354	CTX	PTLp	VISa6b	312782570	Anterior area, layer 6b															
102	381	CTX	OLF	OLF	698	Olfactory areas	0.26889021	1.54887548		1.54887548											
103	382	CTX	OLF	MOB	507	Main olfactory bulb	0.27960612	1.726956		1.726956											
104	389	CTX	OLF	AOBgl	188	Accessory olfactory bulb, glomerular layer	0.55233105	1.03040268		1.03040268											
105	390	CTX	OLF	AOBgr	196	Accessory olfactory bulb, granular layer	0.25374951	1.51729234		1.51729234											
106	391	CTX	OLF	AOBmi	204	Accessory olfactory bulb, mitral layer	0.34803811	1.8920143		1.8920143											
107	392	CTX	OLF	AON	159	Anterior olfactory nucleus	0.36873635	2.44573028		2.44573028											
108	401	CTX	OLF	TTd	597	Taenia tecta, dorsal part	0.3264641														
109	407	CTX	OLF	TTv	605	Taenia tecta, ventral part	0.29350215	1.71106863		1.71106863											
110	412	CTX	OLF	DP	814	Dorsal peduncular area	0.33077543	2.05512862		2.05512862											
111	418	CTX	OLF	PIR	961	Piriform area	0.47510518														
112	456	HPF	HPF	HPF	1089	Hippocampal formation	0.4116441	2.3753974			2.3753974										
113	459	HPF	CA	CA1	382	Field CA1	0.49416335	2.12184757			2.12184757										
114	464	HPF	CA	CA2	423	Field CA2	0.29210956	2.19784116			2.19784116										
115	469	HPF	CA	CA3	463	Field CA3	0.3000125	3.33489052			3.33489052										
116	476	HPF	DG	DG-mo	10703	Dentate gyrus, molecular layer	0.36692633	0.96373262			0.96373262										
117	477	HPF	DG	DG-po	10704	Dentate gyrus, polymorph layer	0.31950949	3.24889693			3.24889693										
118	478	HPF	DG	DG-sg	632	Dentate gyrus, granule cell layer	0.33902156	2.84382259			2.84382259										
119	492	HPF	FC	FC	982	Fasciola cinerea															
120	493	HPF	IG	IG	19	Induseum griseum															
121	529	HPF	PAR	POST	1037	Postsubiculum	0.94558147														
122	537	HPF	SUB	SUB	502	Subiculum	0.43379359	2.67622127			2.67622127										
123	546	HPF	ProS	ProS	484682470	Prosubiculum	0.24138381	1.60763493			1.60763493										
124	561	CTXsp	EP	EPd	952	Endopiriform nucleus, dorsal part															
125	573	CNU	STR	STR	477	Striatum	0.52695811	2.74575808				2.74575808									
126	575	CNU	CP	CP	672	Caudoputamen	0.69107663	2.24681495				2.24681495									
127	577	CNU	ACB	ACB	56	Nucleus accumbens	0.56307174	0.44910856				0.44910856									
128	578	CNU	FS	FS	998	Fundus of striatum		0.06109637				0.06109637									
129	579	CNU	OT	OT	754	Olfactory tubercle	0.54160187	1.94552463				1.94552463									
130	589	CNU	LSX	LSc	250	Lateral septal nucleus, caudal (caudodorsal) part	0.57993161	2.27156106				2.27156106									
131	590	CNU	LSX	LSr	258	Lateral septal nucleus, rostral (rostroventral) part	0.67913718	4.28700883				4.28700883									
132	591	CNU	LSX	LSv	266	Lateral septal nucleus, ventral part	0.64108909	3.31466567				3.31466567									
133	592	CNU	LSX	SF	310	Septofimbrial nucleus	0.58688124	1.71390606				1.71390606									
134	593	CNU	LSX	SH	333	Septohippocampal nucleus															
135	595	CNU	sAMY	AAA	23	Anterior amygdalar area															
136	602	CNU	sAMY	MEA	403	Medial amygdalar nucleus															
137	610	CNU	PAL	PAL	803	Pallidum	0.32457212	1.055058					1.055058								
138	612	CNU	PALd	GPe	1022	Globus pallidus, external segment															
139	615	CNU	PALv	SI	342	Substantia innominata	0.43905686	0.89203256					0.89203256								
140	616	CNU	PALv	MA	298	Magnocellular nucleus	0.05929777	0.48853313					0.48853313								
141	619	CNU	PALm	MS	564	Medial septal nucleus															
142	620	CNU	PALm	NDB	596	Diagonal band nucleus	0.39697078	1.73635821					1.73635821								
143	621	CNU	PALm	TRS	581	Triangular nucleus of septum	0.48271119	1.2418031					1.2418031								
144	623	CNU	PALc	BST	351	Bed nuclei of the stria terminalis	0.35835669	3.32423342					3.32423342								
145	640	CNU	PALc	BAC	287	Bed nucleus of the anterior commissure	0.3951618	0.98431131					0.98431131								
146	643	TH	TH	TH	549	Thalamus	0.46874429	2.25900874						2.25900874							
147	646	TH	DORsm	VAL	629	Ventral anterior-lateral complex of the thalamus	0.40567326	1.25426952						1.25426952							
148	647	TH	DORsm	VM	685	Ventral medial nucleus of the thalamus	0.34728787	2.23764517						2.23764517							

149	649	TH	DORsm	VPL	718	Ventral posterolateral nucleus of the thalamus								
150	650	TH	DORsm	VPLpc	725	Ventral posterolateral nucleus of the thalamus, parvicellular part	0.26988616	0.79191268		0.79191268				
151	651	TH	DORsm	VPM	733	Ventral posteromedial nucleus of the thalamus	0.44746327	1.23405972		1.23405972				
152	652	TH	DORsm	VPMpc	741	Ventral posteromedial nucleus of the thalamus, parvicellular part	0.40094447	4.26278415		4.26278415				
153	653	TH	DORsm	PoT	563807435	Posterior triangular thalamic nucleus	0.07779834	0.79681932		0.79681932				
154	655	TH	DORsm	SPFm	414	Subparafascicular nucleus, magnocellular part	0.35966795							
155	656	TH	DORsm	SPFp	422	Subparafascicular nucleus, parvicellular part	0.4043683	1.61018208		1.61018208				
156	657	TH	DORsm	SPA	609	Subparafascicular area								
157	670	TH	DORpm	LP	218	Lateral posterior nucleus of the thalamus	0.443978	2.73600757		2.73600757				
158	671	TH	DORpm	PO	1020	Posterior complex of the thalamus	0.49596568	0.63057157		0.63057157				
159	672	TH	DORpm	POL	1029	Posterior limiting nucleus of the thalamus	0.17736352	3.51379343		3.51379343				
160	674	TH	DORpm	Eth	560581551	Ethmoid nucleus of the thalamus	0.42609338	1.58112744		1.58112744				
161	677	TH	DORpm	AV	255	Anteroventral nucleus of thalamus	0.51799539	3.96786244		3.96786244				
162	679	TH	DORpm	AMd	1096	Anteromedial nucleus, dorsal part	0.3809688	2.47989128		2.47989128				
163	680	TH	DORpm	AMv	1104	Anteromedial nucleus, ventral part	0.50905708	6.04278319		6.04278319				
164	681	TH	DORpm	AD	64	Anterodorsal nucleus	0.19613351	3.30342019		3.30342019				
165	682	TH	DORpm	IAM	1120	Interanteromedial nucleus of the thalamus								
166	683	TH	DORpm	IAD	1113	Interanterodorsal nucleus of the thalamus	0.55459328	3.39876916		3.39876916				
167	684	TH	DORpm	LD	155	Lateral dorsal nucleus of thalamus	0.45994488	2.51482367		2.51482367				
168	686	TH	DORpm	IMD	59	Intermediodorsal nucleus of the thalamus								
169	687	TH	DORpm	MD	362	Mediodorsal nucleus of thalamus	0.4695948	3.00024026		3.00024026				
170	691	TH	DORpm	SMT	366	Submedial nucleus of the thalamus	0.52151482	2.15282849		2.15282849				
171	692	TH	DORpm	PR	1077	Perireunensis nucleus	0.59909959	5.44247772		5.44247772				
172	694	TH	DORpm	PVT	149	Paraventricular nucleus of the thalamus								
173	695	TH	DORpm	PT	15	Parataenial nucleus	0.57088709							
174	696	TH	DORpm	RE	181	Nucleus of reuniens	0.51413124							
175	699	TH	DORpm	RH	189	Rhomboid nucleus								
176	700	TH	DORpm	CM	599	Central medial nucleus of the thalamus								
177	701	TH	DORpm	PCN	907	Paracentral nucleus	0.48850667	3.1716602		3.1716602				
178	702	TH	DORpm	CL	575	Central lateral nucleus of the thalamus	0.50184652	2.27778627		2.27778627				
179	703	TH	DORpm	PF	930	Parafascicular nucleus	0.4410766	4.8210897		4.8210897				
180	705	TH	DORpm	RT	262	Reticular nucleus of the thalamus	0.61453103	2.9488169		2.9488169				
181	714	TH	DORpm	MH	483	Medial habenula	0.17392119							
182	715	TH	DORpm	LH	186	Lateral habenula	0.56463776	2.02193911		2.02193911				
183	717	HY	HY	HY	1097	Hypothalamus	0.38865368	1.9332961			1.9332961			
184	719	HY	PVZ	SO	390	Supraoptic nucleus	0.30804964	1.14152598			1.14152598			
185	720	HY	PVZ	ASO	332	Accessory supraoptic group	0.22509064							
186	722	HY	PVZ	PVH	38	Paraventricular hypothalamic nucleus								
187	735	HY	PVZ	ARH	223	Arcuate hypothalamic nucleus	0.27000509							
188	737	HY	PVR	ADP	72	Anterodorsal preoptic nucleus								
189	739	HY	PVR	AVP	263	Anteroventral preoptic nucleus	0.53129135	1.78890546			1.78890546			
190	740	HY	PVR	AVPV	272	Anteroventral periventricular nucleus								
191	741	HY	PVR	DMH	830	Dorsomedial nucleus of the hypothalamus	0.34187997	1.45983808			1.45983808			
192	746	HY	PVR	MPO	523	Medial preoptic area	0.43269462	2.00209071			2.00209071			
193	748	HY	PVR	PD	914	Posterodorsal preoptic nucleus	0.53458514							
194	749	HY	PVR	PS	1109	Parastrial nucleus	0.4868106	5.60572034			5.60572034			
195	751	HY	PVR	PVp	126	Periventricular hypothalamic nucleus, posterior part	0.89561336							
196	752	HY	PVR	PVpo	133	Periventricular hypothalamic nucleus, preoptic part								
197	753	HY	PVR	SBPV	347	Subparaventricular zone								
198	754	HY	PVR	SCH	286	Suprachiasmatic nucleus								
199	755	HY	PVR	SFO	338	Subfornical organ								
200	756	HY	PVR	VMPO	576073699	Ventromedial preoptic nucleus	0.13464397							
201	757	HY	PVR	VLPO	689	Ventrolateral preoptic nucleus	0.45606054	1.1463075			1.1463075			
202	759	**HY**	**MEZ**	AHN	88	Anterior hypothalamic nucleus	0.51640363	2.26580823			2.26580823			
203	765	HY	MEZ	LM	210	Lateral mammillary nucleus	0.31078984	1.01603762			1.01603762			
204	767	HY	MEZ	MMme	732	Medial mammillary nucleus, median part								
205	768	HY	MEZ	MMl	606826647	Medial mammillary nucleus, lateral part	0.53497724	1.74577393			1.74577393			
206	769	HY	MEZ	MMm	606826651	Medial mammillary nucleus, medial part	0.32686888							
207	770	HY	MEZ	MMp	606826655	Medial mammillary nucleus, posterior part								
208	771	HY	MEZ	MMd	606826659	Medial mammillary nucleus, dorsal part								
209	772	HY	MEZ	SUM	525	Supramammillary nucleus	0.36083894	2.30886222			2.30886222			
210	776	HY	MEZ	TMd	1126	Tuberomammillary nucleus, dorsal part								
211	777	HY	MEZ	TMv	1	Tuberomammillary nucleus, ventral part	0.32560555	1.11567424			1.11567424			
212	778	**HY**	**MEZ**	MPN	515	Medial preoptic nucleus	0.42298391							
213	782	**HY**	**MEZ**	PMd	980	Dorsal premammillary nucleus	0.55709782	1.76774035			1.76774035			
214	783	**HY**	**MEZ**	PMv	1004	Ventral premammillary nucleus	0.4077727	2.06296313			2.06296313			
215	784	**HY**	**MEZ**	PVHd	63	Paraventricular hypothalamic nucleus, descending division	0.31963659	2.39289891			2.39289891			
216	789	**HY**	**MEZ**	VMH	693	Ventromedial hypothalamic nucleus	0.45288374	1.76763119			1.76763119			
217	794	**HY**	**MEZ**	PH	946	Posterior hypothalamic nucleus	0.3967561	2.44700601			2.44700601			
218	796	HY	LZ	LHA	194	Lateral hypothalamic area	0.36626849	0.77628954			0.77628954			
219	797	HY	LZ	LPO	226	Lateral preoptic area	0.33507633	0.7401193			0.7401193			
220	798	HY	LZ	PST	356	Preparasubthalamic nucleus								
221	799	HY	LZ	PSTN	364	Parasubthalamic nucleus	0.22831036	0.90857994			0.90857994			
222	800	HY	LZ	PeF	576073704	Perifornical nucleus	0.43221892	2.12167603			2.12167603			
223	801	HY	LZ	RCH	173	Retrochiasmatic area	0.25361545	0.67805102			0.67805102			
224	802	HY	LZ	STN	470	Subthalamic nucleus								
225	803	HY	LZ	TU	614	Tuberal nucleus	0.43768988	0.89732366			0.89732366			
226	804	HY	LZ	ZI	797	Zona incerta	0.39765834	2.58299343			2.58299343			
227	806	HY	LZ	FF	804	Fields of Forel	0.44770266	1.12458519			1.12458519			
228	807	**HY**	**ME**	ME	10671	Median eminence								
229	808	**MB**	**MB**	MB	313	Midbrain	0.45208597	2.12621705				2.12621705		
230	811	MB	Mbsen	SCop	851	Superior colliculus, optic layer	0.67763137	2.44319974				2.44319974		
231	812	MB	Mbsen	SCsg	842	Superior colliculus, superficial gray layer	0.70164557	1.36640746				1.36640746		
232	813	MB	Mbsen	SCzo	834	Superior colliculus, zonal layer	0.59582125	1.72529069				1.72529069		
233	815	MB	Mbsen	ICc	811	Inferior colliculus, central nucleus	0.69045731	1.51264498				1.51264498		
234	816	MB	Mbsen	ICd	820	Inferior colliculus, dorsal nucleus	0.65788808	1.98382884				1.98382884		
235	817	MB	Mbsen	ICe	828	Inferior colliculus, external nucleus	0.67484717	1.98546536				1.98546536		
236	821	MB	Mbsen	MEV	460	Midbrain trigeminal nucleus	0.39469257	3.61385261				3.61385261		
237	824	MB	Mbmot	SNr	381	Substantia nigra, reticular part	0.24616458	1.87604619				1.87604619		
238	825	MB	Mbmot	VTA	749	Ventral tegmental area	0.38952927	2.92107234				2.92107234		
239	826	MB	Mbmot	PN	607344830	Paranigral nucleus								
240	827	MB	Mbmot	RR	246	Midbrain reticular nucleus, retrorubral area	0.27008867	1.84178682				1.84178682		
241	828	MB	Mbmot	MRN	128	Midbrain reticular nucleus	0.41659761	2.31327671				2.31327671		
242	833	MB	Mbmot	SCdg	26	Superior colliculus, motor related, deep gray layer	0.55993099	2.14555073				2.14555073		
243	834	MB	Mbmot	SCdw	42	Superior colliculus, motor related, deep white layer	0.52913704	1.86158013				1.86158013		
244	835	MB	Mbmot	SCiw	17	Superior colliculus, motor related, intermediate white layer	0.6260252	2.39978248				2.39978248		
245	836	MB	Mbmot	SCig	10	Superior colliculus, motor related, intermediate gray layer	0.6841155	2.54603959				2.54603959		
246	840	MB	Mbmot	PAG	795	Periaqueductal gray	0.52869756	1.70781068				1.70781068		
247	841	MB	Mbmot	PRC	50	Precommissural nucleus	0.36978067							
248	842	MB	Mbmot	INC	67	Interstitial nucleus of Cajal	0.559776							
249	843	MB	Mbmot	ND	587	Nucleus of Darkschewitsch								
250	844	MB	Mbmot	Su3	614454277	Supraoculomotor periaqueductal gray	0.61996973							
251	846	MB	Mbmot	APN	215	Anterior pretectal nucleus	0.61954741	2.05069884				2.05069884		
252	847	MB	Mbmot	MPT	531	Medial pretectal area	1.131242							
253	848	MB	Mbmot	NOT	628	Nucleus of the optic tract	0.53321454	2.08704799				2.08704799		
254	849	MB	Mbmot	NPC	634	Nucleus of the posterior commissure	0.46898022	3.36792949				3.36792949		
255	850	MB	Mbmot	OP	706	Olivary pretectal nucleus	0.5579272	2.19789376				2.19789376		
256	851	MB	Mbmot	PPT	1061	Posterior pretectal nucleus	0.6448601	3.2327332				3.2327332		
257	852	MB	Mbmot	RPF	549009203	Retroparafascicular nucleus	0.51281217	2.22247195				2.22247195		
258	854	MB	Mbmot	CUN	616	Cuneiform nucleus	0.4984644	2.89919269				2.89919269		
259	855	MB	Mbmot	RN	214	Red nucleus	0.34390903	3.08298665				3.08298665		
260	856	MB	Mbmot	III	35	Oculomotor nucleus								
261	857	MB	Mbmot	MA3	549009211	Medial accesory oculomotor nucleus								
262	860	MB	Mbmot	Pa4	606826663	Paratrochlear nucleus								
263	861	MB	Mbmot	VTN	757	Ventral tegmental nucleus								
264	862	MB	Mbmot	AT	231	Anterior tegmental nucleus								
265	865	MB	Mbmot	MT	58	Medial terminal nucleus of the accessory optic tract	0.37043661	1.26401973				1.26401973		
266	868	MB	Mbsta	SNc	374	Substantia nigra, compact part	0.33085292	0.97075962				0.97075962		
267	869	MB	Mbsta	PPN	1052	Pedunculopontine nucleus	0.41321743	2.40525501				2.40525501		
268	871	MB	Mbsta	IF	12	Interfascicular nucleus raphe								
269	872	MB	Mbsta	IPN	100	Interpeduncular nucleus								
270	873	MB	Mbsta	IPR	607344834	Interpeduncular nucleus, rostral								
271	874	MB	Mbsta	IPC	607344838	Interpeduncular nucleus, caudal								
272	875	MB	Mbsta	IPA	607344842	Interpeduncular nucleus, apical								
273	876	MB	Mbsta	IPL	607344846	Interpeduncular nucleus, lateral	0.7046145							
274	877	MB	Mbsta	IPI	607344850	Interpeduncular nucleus, intermediate								
275	878	MB	Mbsta	IPDM	607344854	Interpeduncular nucleus, dorsomedial								
276	879	MB	Mbsta	IPDL	607344858	Interpeduncular nucleus, dorsolateral								
277	880	MB	Mbsta	IPRL	607344862	Interpeduncular nucleus, rostrolateral								
278	882	MB	Mbsta	CLI	591	Central linear nucleus raphe								
279	883	MB	Mbsta	DR	872	Dorsal nucleus raphe								
280	885	HB	**P**	P	771	Pons	0.30959791	2.09250164					2.09250164	
281	887	HB	P-sen	NLL	612	Nucleus of the lateral lemniscus								
282	892	HB	P-sen	PB	867	Parabrachial nucleus	0.50657956	2.94827578					2.94827578	
283	905	HB	P-sen	POR	122	Superior olivary complex, periolivary region	0.34092869	1.87756032					1.87756032	
284	906	HB	P-sen	SOCm	105	Superior olivary complex, medial part	0.23395139	2.03230112					2.03230112	
285	907	HB	P-sen	SOCl	114	Superior olivary complex, lateral part	0.18799729							
286	909	HB	P-mot	B	280	Barrington's nucleus	-0.2403679							
287	910	HB	P-mot	DTN	880	Dorsal tegmental nucleus								
288	912	HB	P-mot	PDTg	599626927	Posterodorsal tegmental nucleus								
289	913	HB	P-mot	PCG	898	Pontine central gray	0.40513667	2.89805378					2.89805378	
290	914	HB	P-mot	PG	931	Pontine gray	0.18588274	2.12549104					2.12549104	
291	915	HB	P-mot	PRNc	1093	Pontine reticular nucleus, caudal part	0.28633446	2.13474106					2.13474106	
292	917	HB	P-mot	SG	318	Supragenual nucleus								
293	919	HB	P-mot	SUT	534	Supratrigeminal nucleus	0.6266831	1.23733442					1.23733442	
294	920	HB	P-mot	TRN	574	Tegmental reticular nucleus	0.15622777	3.05961207					3.05961207	
295	921	HB	P-mot	V	621	Motor nucleus of trigeminal		0.80372113					0.80372113	
296	922	HB	P-mot	P5	549009215	Peritrigeminal zone	0.39954307	2.55714156					2.55714156	
297	923	HB	P-mot	Acs5	549009219	Accessory trigeminal nucleus	0.49268223	0.36166699					0.36166699	
298	924	HB	P-mot	PC5	549009223	Parvicellular motor 5 nucleus								

299	927	HB	P-sat	CS	679	Superior central nucleus raphe								
300	930	HB	P-sat	LC	147	Locus ceruleus	0.34186008	1.43490673			1.43490673			
301	931	HB	P-sat	LDT	162	Laterodorsal tegmental nucleus	0.37166773	2.37097745			2.37097745			
302	932	HB	P-sat	NI	604	Nucleus incertus	0.22336334							
303	933	HB	P-sat	PRNr	146	Pontine reticular nucleus	0.2511679	2.0436095			2.0436095			
304	934	HB	P-sat	RPO	238	Nucleus raphe pontis								
305	935	HB	P-sat	SLC	350	Subceruleus nucleus	0.38778517	1.58251437			1.58251437			
306	936	HB	P-sat	SLD	358	Sublaterodorsal nucleus	0.26955312	1.82227597			1.82227597			
307	937	HB	**MY**	MY	354	Medulla	0.35328468	2.93265648				2.93265648		
308	939	HB	MY-sen	AP	207	Area postrema								
309	946	HB	MY-sen	CU	711	Cuneate nucleus	0.52457643	1.80969297				1.80969297		
310	947	HB	MY-sen	GR	1039	Gracile nucleus	0.14882501							
311	948	HB	MY-sen	ECU	903	External cuneate nucleus	0.57301591	1.50166157				1.50166157		
312	949	HB	MY-sen	NTB	642	Nucleus of the trapezoid body	0.03231874	1.95443029				1.95443029		
313	950	HB	MY-sen	NTS	651	Nucleus of the solitary tract	0.42898795	2.48676397				2.48676397		
314	956	HB	MY-sen	SPVC	429	Spinal nucleus of the trigeminal, caudal part	0.39638355	1.20750883				1.20750883		
315	957	HB	MY-sen	SPVI	437	Spinal nucleus of the trigeminal, interpolar part	0.00906748							
316	958	HB	MY-sen	SPVO	445	Spinal nucleus of the trigeminal, oral part								
317	964	HB	MY-sen	Pa5	589508451	Paratrigeminal nucleus								
318	967	HB	MY-mot	VI	653	Abducens nucleus	0.17382963							
319	969	HB	MY-mot	VII	661	Facial motor nucleus	0.17428029	1.21840255				1.21840255		
320	970	HB	MY-mot	ACVII	576	Accessory facial motor nucleus	0.0868204							
321	973	HB	MY-mot	AMBd	939	Nucleus ambiguus, dorsal division								
322	974	HB	MY-mot	AMBv	143	Nucleus ambiguus, ventral division								
323	975	HB	MY-mot	DMX	839	Dorsal motor nucleus of the vagus nerve	0.37874728	2.13611804				2.13611804		
324	977	HB	MY-mot	GRN	1048	Gigantocellular reticular nucleus	0.26497306	2.19692541				2.19692541		
325	978	HB	MY-mot	ICB	372	Infracerebellar nucleus	0.18890088							
326	979	HB	MY-mot	IO	83	Inferior olivary complex	0.08713248	1.53350155					1.53350155	
327	980	HB	MY-mot	IRN	136	Intermediate reticular nucleus	0.27915864	0.68839843					0.68839843	
328	981	HB	MY-mot	ISN	106	Inferior salivatory nucleus								
329	982	HB	MY-mot	LIN	203	Linear nucleus of the medulla	0.23319741	2.75008891				2.75008891		
330	984	HB	MY-mot	LRNm	955	Lateral reticular nucleus, magnocellular part	0.1812784	1.37543488				1.37543488		
331	986	HB	MY-mot	MARN	307	Magnocellular reticular nucleus	0.13532732	1.20550719				1.20550719		
332	988	HB	MY-mot	MDRNd	1098	Medullary reticular nucleus, dorsal part	0.231756	1.9246365				1.9246365		
333	989	HB	MY-mot	MDRNv	1107	Medullary reticular nucleus, ventral part	0.2125026	1.82517481				1.82517481		
334	990	HB	MY-mot	PARN	852	Parvicellular reticular nucleus	0.30421676	2.25567008				2.25567008		
335	991	HB	MY-mot	PAS	859	Parasolitary nucleus	0.47524261	1.695795				1.695795		
336	993	HB	MY-mot	PGRNd	970	Paragigantocellular reticular nucleus, dorsal part	0.25650704							
337	994	HB	MY-mot	PGRNl	978	Paragigantocellular reticular nucleus, lateral part	0.19425465	1.79908493				1.79908493		
338	997	HB	MY-mot	NR	177	Nucleus of Roller								
339	998	HB	MY-mot	PRP	169	Nucleus prepositus	0.23648538							
340	1000	HB	MY-mot	PPY	1069	Parapyramidal nucleus	0.20617097	2.62183673				2.62183673		
341	1004	HB	MY-mot	LAV	209	Lateral vestibular nucleus	0.52002796	0.58957135				0.58957135		
342	1005	HB	MY-mot	MV	202	Medial vestibular nucleus	0.42517875	2.49246526				2.49246526		
343	1006	HB	MY-mot	SPIV	225	Spinal vestibular nucleus	0.39602546	1.43345263				1.43345263		
344	1007	HB	MY-mot	SUV	217	Superior vestibular nucleus	0.57026895	0.87255053				0.87255053		
345	1008	HB	MY-mot	x	765	Nucleus x								
346	1009	HB	MY-mot	XII	773	Hypoglossal nucleus								
347	1016	**CB**	**CB**	CB	512	Cerebellum	0.29507626	2.14036986					2.14036986	
348	1022	CB	CBX	LING	912	Lingula (I)	0.40663638	1.89938955					1.89938955	
349	1027	CB	CBX	CENT2	976	Lobule II	0.26054895	2.11066166					2.11066166	
350	1031	CB	CBX	CENT3	984	Lobule III	0.22520408	2.28027364					2.28027364	
351	1044	CB	CBX	CUL4	1091	Lobules IV-V	0.19205775	2.02488396					2.02488396	
352	1048	CB	CBX	DEC	936	Declive (VI)	0.17420802	1.88404357					1.88404357	
353	1052	CB	CBX	FOTU	944	Folium-tuber vermis (VII)	0.1918792	1.5492259					1.5492259	
354	1056	CB	CBX	PYR	951	Pyramus (VIII)	0.26885325	1.9453271					1.9453271	
355	1060	CB	CBX	UVU	957	Uvula (IX)	0.39485653	2.05864333					2.05864333	
356	1064	CB	CBX	NOD	968	Nodulus (X)	0.20678499	2.18510643					2.18510643	
357	1069	CB	CBX	SIM	1007	Simple lobule								
358	1074	CB	CBX	ANcr1	1056	Crus 1								
359	1078	CB	CBX	ANcr2	1064	Crus 2								
360	1082	CB	CBX	PRM	1025	Paramedian lobule	0.68804975							
361	1086	CB	CBX	COPY	1033	Copula pyramidis	0.39742515	1.28966301					1.28966301	
362	1099	CB	CBN	FN	989	Fastigial nucleus	0.39441431	2.04621364					2.04621364	
363	1100	CB	CBN	IP	91	Interposed nucleus								
364	1102	CB	CBN	VeCB	589508455	Vestibulocerebellar nucleus	0.23523974	0.56169355					0.56169355	
365	1105	**fiber tracts**	**fiber tracts**	tracts	1009	fiber tracts	0.34641256	0.82679832						0.82679832
366	1106	fiber tracts	cm	von	949	vomeronasal nerve								
367	1108	fiber tracts	cm	onl	1016	olfactory nerve layer of main olfactory bulb	-0.0376104	1.3645028						1.3645028
368	1110	fiber tracts	cm	lot	665	lateral olfactory tract, body	-0.323588	0.47332838						0.47332838
369	1111	fiber tracts	cm	lotd	538	dorsal limb	0.37256484	1.94106924						1.94106924
370	1113	fiber tracts	cm	aco	900	anterior commissure, olfactory limb	0.46494147	2.05324239						2.05324239
371	1114	fiber tracts	cm	lln	848	optic nerve								
372	1116	fiber tracts	cm	bsc	916	brachium of the superior colliculus								
373	1117	fiber tracts	cm	csc	336	superior colliculus commissure								
374	1118	fiber tracts	cm	och	117	optic chiasm	-0.206122	0.47338037						0.47338037
375	1119	fiber tracts	cm	opt	125	optic tract	0.24506996	0.464858						0.464858
376	1121	fiber tracts	cm	lIIn	832	oculomotor nerve	0.49101765	2.02946048						2.02946048
377	1122	fiber tracts	cm	mlf	62	medial longitudinal fascicle								
378	1123	fiber tracts	cm	pc	158	posterior commissure								
379	1124	fiber tracts	cm	lVn	911	trochlear nerve	-0.0212123							
380	1131	fiber tracts	cm	spIV	794	spinal tract of the trigeminal nerve		0.50986396						0.50986396
381	1132	fiber tracts	cm	VIIn	798	facial nerve	0.65849522	1.88303589						1.88303589
382	1134	fiber tracts	cm	gVIIn	1116	genu of the facial nerve	0.59280772	1.42778551						1.42778551
383	1139	fiber tracts	cm	tb	841	trapezoid body	0.14020758	1.11477385						1.11477385
384	1141	fiber tracts	cm	das	506	dorsal acoustic stria	0.09838088	0.17291171						0.17291171
385	1142	fiber tracts	cm	ll	658	lateral lemniscus	0.44878492	0.72088093						0.72088093
386	1143	fiber tracts	cm	cic	633	inferior colliculus commissure	0.15811319							
387	1147	fiber tracts	cm	ts	237	solitary tract	0.58057244	1.58908968						1.58908968
388	1158	fiber tracts	cm	cuf	380	cuneate fascicle	0.39037503	0.4980991						0.4980991
389	1161	fiber tracts	cm	ml	697	medial lemniscus	0.29765879	2.08041897						2.08041897
390	1174	fiber tracts	cbf	cbc	744	cerebellar commissure								
391	1176	fiber tracts	cbf	scp	326	superior cerebelar peduncles	0.34784402	2.23189209						2.23189209
392	1177	fiber tracts	cbf	dscp	812	superior cerebellar peduncle decussation								
393	1179	fiber tracts	cbf	uf	850	uncinate fascicle	0.03148926	1.8538329						1.8538329
394	1180	fiber tracts	cbf	sctv	866	ventral spinocerebellar tract	0.38493745	1.02063517						1.02063517
395	1181	fiber tracts	cbf	mcp	78	middle cerebellar peduncle	-0.1029544	0.57851797						0.57851797
396	1190	fiber tracts	cbf	arb	728	arbor vitae	0.35484478	0.58721562						0.58721562
397	1191	fiber tracts	**scwm**	scwm	484682512	supra-callosal cerebral white matter								
398	1194	fiber tracts	lfbs	fa	956	corpus callosum, anterior forceps	0.23783221	2.06532606						2.06532606
399	1195	fiber tracts	lfbs	ec	579	external capsule								
400	1197	fiber tracts	lfbs	ccg	1108	genu of corpus callosum	0.34021676	1.41505142						1.41505142
401	1198	fiber tracts	lfbs	fp	971	corpus callosum, posterior forceps	0.21921276	1.4155154						1.4155154
402	1200	fiber tracts	lfbs	ccb	484682516	corpus callosum, body	0.28939029	0.88415715						0.88415715
403	1201	fiber tracts	lfbs	ccs	986	corpus callosum, splenium	0.22210061	1.53552375						1.53552375
404	1202	fiber tracts	lfbs	cst	784	corticospinal tract	0.2120088	0.89551655						0.89551655
405	1203	fiber tracts	lfbs	int	6	internal capsule		0.3351418						0.3351418
406	1204	fiber tracts	lfbs	cpd	924	cerebal peduncle	0.21675412	1.22644761						1.22644761
407	1209	fiber tracts	lfbs	py	190	pyramid	0.54270229	1.23776883						1.23776883
408	1214	fiber tracts	lfbs	em	1092	external medullary lamina of the thalamus								
409	1223	fiber tracts	eps	nst	102	nigrostriatal tract								
410	1230	fiber tracts	eps	dtd	1060	doral tegmental decussation								
411	1231	fiber tracts	eps	tspc	1043	crossed tectospinal pathway	0.19463708							
412	1232	fiber tracts	eps	rust	863	rubrospinal tract	0.24435445	1.85300673						1.85300673
413	1233	fiber tracts	eps	vtd	397	ventral tegmental decussation								
414	1244	fiber tracts	mfbs	act	908	anterior commissure, temporal limb	0.63520212	2.3497519						2.3497519
415	1245	fiber tracts	mfbs	cing	940	cingulum bundle	0.28320448	1.64054173						1.64054173
416	1247	fiber tracts	mfbs	alv	466	alveus	0.38505674	1.56596453						1.56596453
417	1248	fiber tracts	mfbs	df	530	dorsal fornix								
418	1249	fiber tracts	mfbs	fi	603	fimbria	0.42119421	1.50170364						1.50170364
419	1254	fiber tracts	mfbs	fx	436	columns of the fornix	0.39214499	2.46228423						2.46228423
420	1256	fiber tracts	mfbs	dhc	443	dorsal hippocampal commisure	0.42931649	1.09849364						1.09849364
421	1257	fiber tracts	mfbs	vhc	449	ventral hippocampal commissure	0.9732267							
422	1261	fiber tracts	mfbs	st	301	stria terminalis	-0.1642368	0.23827274						0.23827274
423	1264	fiber tracts	mfbs	mfb	54	medial forebrain bundle	0.42058255	2.6349574						2.6349574
424	1267	fiber tracts	mfbs	sup	349	supraoptic commissures	0.14693069	1.25102687						1.25102687
425	1280	fiber tracts	mfbs	pm	753	principal mammillary tract	0.53146142							
426	1281	fiber tracts	mfbs	mtt	690	mammillothalamic tract	0.42152967	3.59325756						3.59325756
427	1282	fiber tracts	mfbs	mtg	681	mammillotegmental tract								
428	1283	fiber tracts	mfbs	mp	673	mammillary peduncle	0.28927841	1.57263583						1.57263583
429	1287	fiber tracts	mfbs	sm	802	stria medullaris	0.48215964	2.01583384						2.01583384
430	1288	fiber tracts	mfbs	fr	595	fasciculus retroflexus	0.71467238							
431	1289	fiber tracts	mfbs	hbc	611	habenular commissure								
432	1292	VS	VL	VL	81	lateral ventricle	0.72396199	0.53108278						0.53108278
433	1297	VS	VL	SEZ	98	subependymal zone	0.21119014	1.84284641						1.84284641
434	1298	VS	VL	chpl	108	choroid plexus	0.41136191	1.00758218						1.00758218
435	1301	VS	V3	V3	129	third ventricle	-0.1104045	1.34249367						1.34249367
436	1302	VS	AQ	AQ	140	cerebral aqueduct	0.69705638							
437	1303	VS	V4	V4	145	fourth ventricle	0.14045345	1.16918542						1.16918542
438	1304	VS	V4	V4r	153	lateral recess	0.72177573	0.70198278						0.70198278

Data Description: Fig. S1D. Ventricular system area (um^2) measurements obtained by QUINT histology pipeline.

QUINT Ventricular System Area (um^2)

PPT1-2	PPT1-4	PPT1-7	WT-2	WT-12	WT-18	WT-24
967434.206	1042737.721	1143363.92	1287007.077	1068934.54	874181.499	938545.342
769763.415	1274313.299	1669431.58	1291570.719	896702.81	950356.264	1059503.88
1047202.92	1553808.176	1803082.47	1133943.382	1360540.61	1259317.71	1305552.89
960427.142	983714.9044	2100946.82	1121380.374	1257110.46	1618687.18	1333239.07

Two-way AN	Ordinary
Alpha	0.05

Source of Va	% of total var	P value	P value summ	Significant?
Row Factor	19.26	0.0373	*	Yes
Column Fact	47.63	0.0072	**	Yes

ANOVA tabl	SS (Type III)	DF	MS	F (DFn, DFd	P value
Row Factor	4.89541E+11	3	1.6318E+11	F (3, 18) = 3.	P=0.0373
Column Fact	1.21072E+12	6	2.01787E+11	F (6, 18) = 4.	P=0.0072
Residual	8.41879E+11	18	46771077799		

Data summary	
Number of columns (Column Factor)	7
Number of rows (Row Factor)	4
Number of values	28

Tukey's multiple comparisons test	Mean Diff.	95.00% CI of diff.	Below threshold?	Summary	Adjusted P Value
PPT1-2 vs. PPT1-4	-277437	-782757 to 2	No	ns	0.5557
PPT1-2 vs. PPT1-7	-742999	-1248320 to	Yes	**	0.002
PPT1-2 vs. WT-2	-272268	-777589 to 2	No	ns	0.576
PPT1-2 vs. WT-12	-209615	-714935 to 2	No	ns	0.8097
PPT1-2 vs. WT-18	-239429	-744749 to 2	No	ns	0.7041
PPT1-2 vs. WT-24	-223003	-728324 to 2	No	ns	0.7643
PPT1-4 vs. PPT1-7	-465563	-970883 to 3	No	ns	0.0826
PPT1-4 vs. WT-2	5168	-500152 to 5	No	ns	>0.9999
PPT1-4 vs. WT-12	67821	-437499 to 5	No	ns	0.9993
PPT1-4 vs. WT-18	38008	-467312 to 5	No	ns	>0.9999
PPT1-4 vs. WT-24	54433	-450887 to 5	No	ns	0.9998
PPT1-7 vs. WT-2	470731	-34589 to 97	No	ns	0.0775
PPT1-7 vs. WT-12	533384	28064 to 103	Yes	*	0.0347
PPT1-7 vs. WT-18	503571	-1750 to 100	No	ns	0.0511
PPT1-7 vs. WT-24	519996	14676 to 102	Yes	*	0.0413
WT-2 vs. WT-12	62653	-442667 to 5	No	ns	0.9995
WT-2 vs. WT-18	32840	-472481 to 5	No	ns	>0.9999
WT-2 vs. WT-24	49265	-456055 to 5	No	ns	0.9999
WT-12 vs. WT-18	-29814	-535134 to 4	No	ns	>0.9999
WT-12 vs. WT-24	-13388	-518708 to 4	No	ns	>0.9999
WT-18 vs. WT-24	16425	-488895 to 5	No	ns	>0.9999

Unpaired t tests	
Comparison	WT-2 vs PPT1-2
P value	0.0111
P value summary	*
Significantly different (P < 0	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=3.622, df=6

Data Description: Fig. 1I, S1E, S1G - Average lipofuscin loads determined by QUINT for specific cortical and hippocampal regions displayed in heatmaps and corresponding standard deviations.

Figure 1I. Motor cortex lipofuscin load

Primary Annotation	Secondary Annotation	Tertiary Annotation	Region ID	Region Name	PPT1-2 Average Load	PPT1-4 Average Load	PPT1-7 Average Load	WT-2 Average Load	WT-12 Average Load	WT-18 Average Load	WT-24 Average Load
CTX	MO	MOp1	320	Primary motor area, Layer 1	0.0096	0.0238	0.0697	0.0005	0.0076	0.0075	0.0079
CTX	MO	MOp2/3	943	Primary motor area, Layer 2/3	0.0490	0.0793	0.1411	0.0003	0.0190	0.0189	0.0331
CTX	MO	MOp5	648	Primary motor area, Layer 5	0.0491	0.0862	0.1194	0.0005	0.0277	0.0314	0.0427
CTX	MO	MOp6a	844	Primary motor area, Layer 6a	0.0569	0.0878	0.2384	0.0010	0.0327	0.0409	0.0484
CTX	MO	MOp6b	882	Primary motor area, Layer 6b	0.0543	0.0706	0.0779	0.0023	0.0269	0.0298	0.0325
CTX	MO	MOs1	656	Secondary motor area, layer 1	0.0090	0.0213	0.0655	0.0001	0.0055	0.0061	0.0069
CTX	MO	MOs2/3	962	Secondary motor area, layer 2/3	0.0388	0.0758	0.1225	0.0002	0.0176	0.0238	0.0327
CTX	MO	MOs5	767	Secondary motor area, layer 5	0.0385	0.0679	0.1094	0.0005	0.0216	0.0309	0.0382
CTX	MO	MOs6a	1021	Secondary motor area, layer 6a	0.0446	0.0806	0.2554	0.0008	0.0218	0.0310	0.0410
CTX	MO	MOs6b	1085	Secondary motor area, layer 6b	0.0448	0.0646	0.0833	0.0028	0.0178	0.0323	0.0350
Primary Annotation	Secondary Annotation	Tertiary Annotation	Region ID	Region Name	PPT1-2 Standard Deviation	PPT1-4 Standard Deviation	PPT1-7 Standard Deviation	WT-2 Standard Deviation	WT-12 Standard Deviation	WT-18 Standard Deviation	WT-24 Standard Deviation
CTX	MO	MOp1	320	Primary motor area, Layer 1	0.0031	0.0067	0.0267	0.0004	0.0022	0.0027	0.0012
CTX	MO	MOp2/3	943	Primary motor area, Layer 2/3	0.0060	0.0047	0.0105	0.0001	0.0053	0.0023	0.0044
CTX	MO	MOp5	648	Primary motor area, Layer 5	0.0129	0.0209	0.0104	0.0004	0.0043	0.0027	0.0089
CTX	MO	MOp6a	844	Primary motor area, Layer 6a	0.0108	0.0190	0.2277	0.0006	0.0067	0.0041	0.0068
CTX	MO	MOp6b	882	Primary motor area, Layer 6b	0.0239	0.0278	0.0291	0.0019	0.0190	0.0185	0.0207
CTX	MO	MOs1	656	Secondary motor area, layer 1	0.0027	0.0049	0.0131	0.0000	0.0013	0.0016	0.0015
CTX	MO	MOs2/3	962	Secondary motor area, layer 2/3	0.0038	0.0089	0.0084	0.0001	0.0038	0.0042	0.0064
CTX	MO	MOs5	767	Secondary motor area, layer 5	0.0032	0.0077	0.0130	0.0002	0.0022	0.0102	0.0060
CTX	MO	MOs6a	1021	Secondary motor area, layer 6a	0.0051	0.0094	0.2799	0.0005	0.0026	0.0027	0.0068
CTX	MO	MOs6b	1085	Secondary motor area, layer 6b	0.0223	0.0221	0.0258	0.0014	0.0116	0.0231	0.0084

Figure S1E. Retrosplenial cortex lipofuscin load

Primary Annotation	Secondary Annotation	Tertiary Annotation	Region ID	Region Name	PPT1-2 Average Load	PPT1-4 Average Load	PPT1-7 Average Load	WT-2 Average Load	WT-12 Average Load	WT-18 Average Load	WT-24 Average Load
CTX	RSP	RSPagl1	671	Retrosplenial area, lateral agranular part,	0.0132	0.0290	0.0678	0.0004	0.0056	0.0061	0.0119
CTX	RSP	RSPagl2/3	965	Retrosplenial area, lateral agranular part,	0.0564	0.0934	0.1379	0.0005	0.0170	0.0186	0.0338
CTX	RSP	RSPagl5	774	Retrosplenial area, lateral agranular part,	0.0518	0.0984	0.1317	0.0007	0.0289	0.0300	0.0492
CTX	RSP	RSPagl6a	906	Retrosplenial area, lateral agranular part,	0.0574	0.0958	0.5717	0.0014	0.0310	0.0373	0.0468
CTX	RSP	RSPagl6b	279	Retrosplenial area, lateral agranular part,	0.0505	0.0700	0.0666	0.0028	0.0224	0.0257	0.0364
CTX	RSP	RSPd1	442	Retrosplenial area, dorsal part, layer 1	0.0134	0.0440	0.0973	0.0002	0.0072	0.0060	0.0138
CTX	RSP	RSPd2/3	434	Retrosplenial area, dorsal part, layer 2/3	0.0586	0.1041	0.1548	0.0002	0.0188	0.0193	0.0401
CTX	RSP	RSPd5	610	Retrosplenial area, dorsal part, layer 5	0.0522	0.0978	0.1358	0.0010	0.0212	0.0260	0.0471
CTX	RSP	RSPd6a	274	Retrosplenial area, dorsal part, layer 6a	0.0510	0.0954	0.3608	0.0006	0.0202	0.0295	0.0451
CTX	RSP	RSPd6b	330	Retrosplenial area, dorsal part, layer 6b	0.0462	0.0710	0.0732	0.0023	0.0195	0.0312	0.0402
CTX	RSP	RSPv1	542	Retrosplenial area, ventral part, layer 1	0.0213	0.0690	0.1036	0.0009	0.0039	0.0056	0.0157
CTX	RSP	RSPv2/3	430	Retrosplenial area, ventral part, layer 2/3	0.0604	0.1347	0.1410	0.0009	0.0059	0.0128	0.0222
CTX	RSP	RSPv5	687	Retrosplenial area, ventral part, layer 5	0.0548	0.1134	0.1510	0.0015	0.0182	0.0274	0.0453
CTX	RSP	RSPv6a	590	Retrosplenial area, ventral part, layer 6a	0.0600	0.1024	0.8011	0.0008	0.0167	0.0256	0.0489
CTX	RSP	RSPv6b	622	Retrosplenial area, ventral part, layer 6b	0.0416	0.0796	0.0859	0.0012	0.0156	0.0247	0.0372
Primary Annotation	Secondary Annotation	Tertiary Annotation	Region ID	Region Name	PPT1-2 Standard Deviation	PPT1-4 Standard Deviation	PPT1-7 Standard Deviation	WT-2 Standard Deviation	WT-12 Standard Deviation	WT-18 Standard Deviation	WT-24 Standard Deviation
CTX	RSP	RSPagl1	671	Retrosplenial area, lateral agranular part,	0.0023	0.0089	0.0048	0.0004	0.0017	0.0021	0.0023
CTX	RSP	RSPagl2/3	965	Retrosplenial area, lateral agranular part,	0.0081	0.0138	0.0122	0.0001	0.0088	0.0068	0.0053
CTX	RSP	RSPagl5	774	Retrosplenial area, lateral agranular part,	0.0106	0.0212	0.0185	0.0002	0.0056	0.0062	0.0050
CTX	RSP	RSPagl6a	906	Retrosplenial area, lateral agranular part,	0.0123	0.0343	0.9202	0.0016	0.0089	0.0029	0.0062
CTX	RSP	RSPagl6b	279	Retrosplenial area, lateral agranular part,	0.0155	0.0344	0.0325	0.0007	0.0107	0.0127	0.0051
CTX	RSP	RSPd1	442	Retrosplenial area, dorsal part, layer 1	0.0046	0.0141	0.0161	0.0001	0.0028	0.0032	0.0035
CTX	RSP	RSPd2/3	434	Retrosplenial area, dorsal part, layer 2/3	0.0152	0.0155	0.0087	0.0001	0.0044	0.0071	0.0073
CTX	RSP	RSPd5	610	Retrosplenial area, dorsal part, layer 5	0.0071	0.0018	0.0052	0.0002	0.0039	0.0078	0.0087
CTX	RSP	RSPd6a	274	Retrosplenial area, dorsal part, layer 6a	0.0097	0.0047	0.4926	0.0002	0.0065	0.0046	0.0062
CTX	RSP	RSPd6b	330	Retrosplenial area, dorsal part, layer 6b	0.0104	0.0211	0.0226	0.0021	0.0137	0.0133	0.0089
CTX	RSP	RSPv1	542	Retrosplenial area, ventral part, layer 1	0.0084	0.0073	0.0146	0.0011	0.0016	0.0027	0.0046
CTX	RSP	RSPv2/3	430	Retrosplenial area, ventral part, layer 2/3	0.0160	0.0074	0.0052	0.0008	0.0030	0.0071	0.0062
CTX	RSP	RSPv5	687	Retrosplenial area, ventral part, layer 5	0.0076	0.0040	0.0206	0.0007	0.0032	0.0126	0.0048
CTX	RSP	RSPv6a	590	Retrosplenial area, ventral part, layer 6a	0.0052	0.0062	1.3717	0.0004	0.0044	0.0066	0.0059
CTX	RSP	RSPv6b	622	Retrosplenial area, ventral part, layer 6b	0.0194	0.0166	0.0106	0.0004	0.0030	0.0013	0.0094

Figure S1G. Hippocampal formation lipofuscin load

Primary Annotation	Secondary Annotation	Tertiary Annotation	Region ID	Region Name	PPT1-2 Average Load	PPT1-4 Average Load	PPT1-7 Average Load	WT-2 Average Load	WT-12 Average Load	WT-18 Average Load	WT-24 Average Load
HPF	CA	CA1	382	Field CA1	0.0268	0.0428	0.0596	0.0003	0.0059	0.0107	0.0185
HPF	CA	CA2	423	Field CA2	0.0332	0.0510	0.0599	0.0013	0.0154	0.0233	0.0302
HPF	CA	CA3	463	Field CA3	0.0433	0.0590	0.0665	0.0003	0.0172	0.0287	0.0343
HPF	DG	DG-mo	10703	Dentate gyrus, molecular layer	0.0095	0.0255	0.0586	0.0004	0.0024	0.0041	0.0057
HPF	DG	DG-po	10704	Dentate gyrus, polymorph layer	0.0351	0.0735	0.0597	0.0011	0.0115	0.0324	0.0240
HPF	DG	DG-sg	632	Dentate gyrus, granule cell layer	0.0356	0.1167	0.1627	0.0006	0.0052	0.0071	0.0113
HPF	SUB	SUB	502	Subiculum	0.0484	0.0763	0.0906	0.0020	0.0107	0.0181	0.0291
HPF	ProS	ProS	484682470	Prosubiculum	0.0379	0.0645	0.0828	0.0015	0.0180	0.0187	0.0315
Primary Annotation	Secondary Annotation	Tertiary Annotation	Region ID	Region Name	PPT1-2 Standard Deviation	PPT1-4 Standard Deviation	PPT1-7 Standard Deviation	WT-2 Standard Deviation	WT-12 Standard Deviation	WT-18 Standard Deviation	WT-24 Standard Deviation
HPF	CA	CA1	382	Field CA1	0.0038	0.0044	0.0066	0.0001	0.0018	0.0029	0.0035
HPF	CA	CA2	423	Field CA2	0.0101	0.0060	0.0108	0.0011	0.0033	0.0048	0.0067
HPF	CA	CA3	463	Field CA3	0.0068	0.0056	0.0076	0.0001	0.0033	0.0029	0.0023
HPF	DG	DG-mo	10703	Dentate gyrus, molecular layer	0.0031	0.0065	0.0363	0.0002	0.0003	0.0003	0.0007
HPF	DG	DG-po	10704	Dentate gyrus, polymorph layer	0.0105	0.0219	0.0110	0.0002	0.0021	0.0297	0.0044
HPF	DG	DG-sg	632	Dentate gyrus, granule cell layer	0.0197	0.0082	0.0058	0.0003	0.0010	0.0022	0.0025
HPF	SUB	SUB	502	Subiculum	0.0053	0.0075	0.0080	0.0009	0.0020	0.0051	0.0045
HPF	ProS	ProS	484682470	Prosubiculum	0.0168	0.0177	0.0202	0.0004	0.0115	0.0067	0.0121

Data Description: Fig. 1J +1K - Data underlying histograms and lognormal curve fits with bins = 2000 A.U. and bar graph of QUINT detected cells.

	PPT1KO-2				PPT1KO-4				PPT1KO-7				WT-2				WT-12				WT-18				WT-24			
Replicate ID	PPT1-2_s001	PPT1-2 s089	PPT1-2 s081	PPT1-2 s014	PPT1-4 s019	PPT1-4 s047	PPT1-4 s077	PPT1-4 s018	PPT1-7 s013	PPT1-7 s027	PPT1-7 s013	PPT1-7 s035	WT-2 s057-6	WT-2 s035-3	WT-2 s085-8	WT-2 s093-9	WT-12 s017	WT-12 s043	WT-12 s061	WT-12 s006	WT-18 s005	WT-18 s051	WT-18 s065	WT-18 s002	WT-24-s009	WT-24 s039	WT-24 s069	WT-24 s097
Min	1119.2858	1518.9358	1321.0858	977.7153	1142.4799	893.0468	959.4807	1462.6676	1126.6086	1314.5496	1146.0303	904.192	1192.759	902.9589	1319.1165	1222.7723	1349.8103	1402.2042	1195.427	944.4161	1182.6534	1097.5542	1440.6841	1338.9307	1340.7594	1340.8224	939.0744	1277.2253
Max	65313.3555	50647.3281	32264.7168	47390	60902.5781	49653.9805	84321.2578	40782.5156	63867.7656	85201.1797	65282.3164	64944.3945	45767.0938	62969.4688	60896.0352	57615.4766	59898.0234	65535	61906.6211	45562.7617	61390.8398	32441.0684	38320.5078	31887.1543	40299.2969	50553.8906	46268.4727	54950.5625
Range	64194.0697	49128.3923	30943.631	46412.2847	59760.0982	48760.9337	63361.7771	39319.848	62741.157	63886.6301	64136.2861	64040.2025	44574.3348	62066.5099	59576.9187	56392.7043	58548.2131	64132.7958	60711.1941	44618.3456	60208.1864	31343.5142	36879.8237	30548.2236	38958.5375	49213.0682	45329.3983	53673.3372
# of Lipofuscin + values	155540	234770	194603	256654	503692	475360	472983	373333	663178	614760	589271	636869	6309	4489	10319	3895	78288	103507	91624	97267	123609	110071	34954	181809	190050	226318	225286	215836
# of DAPI + Lipo - values	671920	649547	636939	671193	390300	410443	291057	338916	189753	178307	181723	155027	881329	852312	890919	875575	820365	722047	786299	721753	623518	686144	164635	741927	636863	630798	713583	694795
# of total cells detected	827460	884317	831542	927847	893992	885803	764040	712249	852931	793067	770994	791896	887638	856801	901238	879470	898653	825554	877923	819020	747127	796215	199589	923736	826913	857116	938869	910631

* some regions missing from one slice

		PPT1KO-2				PPT1KO-4				PPT1KO-7				WT-2				WT-12				WT-18				WT-24			
Bin #	**Bin Range**	**PPT1-2mo_s0**	**PPT1-2 s089**	**PPT1-2 s081**	**PPT1-2 s014**	**PPT1-4 s019**	**PPT1-4 s047**	**PPT1-4 s077**	**PPT1-4 s018**	**PPT1-7 s013**	**PPT1-7 s027**	**PPT1-7 s073**	**PPT1-7 s035**	**WT-2 s057-6**	**WT-2 s035-3**	**WT-2 s085-8**	**WT-2 s093-9**	**WT-12 s017**	**WT-12 s043**	**WT-12 s061**	**WT-12 s006**	**WT-18 s005**	**WT-18 s051**	**WT-18 s065**	**WT-18 s002**	**WT-24-s009**	**WT-24 s039**	**WT-24 s069**	**WT-24 s097**
1	0-2000	280	11	67	127	144	182	461	31	368	71	134	162	42	17	51	8	48	55	63	103	68	208	45	122	68	38	123	114
2	2000-4000	37356	4685	21419	13627	48214	35613	29560	1839	33851	4380	22075	21598	1697	1299	1869	1242	11853	7657	12220	12626	13533	26011	4914	31868	24706	4130	31156	25947
3	4000-6000	88272	50257	107199	72171	205606	165740	137998	22383	157555	28346	128698	88936	2981	2633	3479	1929	38113	46377	46756	27821	59869	60783	16391	71576	126011	70236	101047	77758
4	6000-8000	26454	112336	55479	107410	163250	173795	165773	69802	198750	81971	195551	149943	1087	400	1867	227	20355	37384	26694	21753	37416	19977	7240	49702	33404	85774	71413	64728
5	8000-10000	2597	56574	8462	51859	56391	68953	83056	94047	129319	148574	122296	141762	236	56	1447	42	5274	9513	4812	21484	10085	2478	3403	21067	4452	44954	16775	34918
6	10000-12000	349	9049	1575	9191	16936	19245	32852	88340	64362	140916	53277	98749	98	35	1067	44	785	1627	719	9799	2038	433	2122	5290	905	15631	3261	8871
7	12000-14000	111	1524	298	1614	6780	6574	12818	57281	31470	92330	25917	53388	49	14	311	38	305	354	152	2804	368	91	621	1472	268	3950	894	2239
8	14000-16000	30	228	63	430	3106	2723	5376	26575	16819	49545	14488	28913	45	17	70	40	707	113	76	664	107	55	136	423	114	993	316	708
9	16000-18000	21	54	23	129	1506	1271	2439	9363	10169	25958	8722	17292	24	11	32	18	432	85	35	125	48	15	44	142	47	347	145	253
10	18000-20000	13	20	11	51	693	591	1092	2459	6392	14528	5508	11017	17	4	21	20	213	46	24	25	25	15	23	74	30	111	75	108
11	20000-22000	12	13	4	21	382	272	640	746	4306	8914	3731	7432	5	0	17	19	68	39	12	15	13	2	5	36	13	60	30	54
12	22000-24000	7	5	3	9	229	155	340	287	2859	5914	2532	4971	7	1	15	15	28	25	9	8	7	1	4	24	15	38	15	35
13	24000-26000	2	5	0	4	143	81	190	96	2020	4151	1751	3402	4	0	14	23	24	18	10	7	9	0	4	7	8	22	14	32
14	26000-28000	5	3	0	2	98	55	116	44	1371	2866	1285	2382	8	0	10	22	13	20	7	1	3	1	0	4	3	14	6	10
15	28000-30000	1	0	0	4	57	39	95	22	1046	1972	944	1826	5	0	10	17	10	13	11	4	5	1	1	1	2	10	7	10
16	30000-32000	2	2	0	2	43	24	64	9	757	1314	717	1315	0	0	3	21	10	22	2	2	5	0	1	2	0	3	2	8
17	32000-34000	0	1	1	1	23	19	37	5	539	897	438	1001	1	0	7	19	6	8	2	1	4	1	0	0	1	6	1	3
18	34000-36000	1	0	0	0	19	7	27	1	359	656	341	754	2	0	1	16	8	20	3	3	0	0	0	0	1	1	2	4
19	36000-38000	0	0	0	2	21	5	15	2	275	478	255	555	0	0	2	18	5	8	2	0	1	0	0	0	1	0	1	6
20	38000-40000	1	1	0	0	12	5	8	0	184	352	191	403	0	0	4	18	5	11	3	0	1	0	1	0	1	0	1	6
21	40000-42000	3	1	0	0	7	4	5	2	135	222	120	294	0	0	3	18	3	6	2	1	1	0	0	0	1	0	1	5
22	42000-44000	0	0	0	0	7	3	3	0	92	139	95	221	1	0	8	13	6	6	4	1	1	0	0	0	0	0	0	4
23	44000-46000	0	0	0	0	10	3	6	0	63	93	75	172	1	0	6	11	3	15	0	1	1	0	0	0	0	0	1	6
24	46000-48000	1	0	0	1	8	1	4	0	40	67	47	119	0	0	3	18	5	11	2	0	1	0	0	0	0	0	1	1
25	48000-50000	2	1	0	0	0	1	1	0	20	41	32	99	0	0	2	19	2	6	1	0	0	0	0	0	0	0	0	6
26	50000-52000	1	1	0	0	2	0	1	0	20	28	17	49	0	0	0	7	3	7	0	0	0	0	0	0	0	1	0	0
27	52000-54000	1	0	0	0	0	0	0	0	15	15	9	36	0	0	0	10	1	5	0	0	0	0	0	0	0	0	0	2
28	54000-56000	3	0	0	0	4	0	0	0	12	7	13	23	0	0	0	2	1	9	0	0	0	0	0	0	0	0	0	1
29	56000-58000	2	0	0	0	1	0	1	0	5	5	4	26	0	0	0	2	1	5	1	0	0	0	0	0	0	0	0	0
30	58000-60000	2	0	0	0	0	2	0	0	0	4	5	16	0	0	0	0	2	7	2	0	0	0	0	0	0	0	0	0
31	60000-62000	7	0	0	0	1	0	2	0	3	3	3	5	0	2	1	0	0	6	1	0	1	0	0	0	0	0	0	0
32	62000-64000	2	0	0	0	0	0	1	0	3	3	0	7	0	1	0	0	0	11	0	0	0	0	0	0	0	0	0	0
33	64000-66000	3	0	0	0	0	0	1	0	0	1	1	2	0	0	0	0	0	19	0	0	0	0	0	0	0	0	0	0

Statistics: Lognormal least squares fit

Best-fit values

A	618366828	1123444295	1373788072	16309144	259000147	320233126	622606766
GeoMean	7220	7804	9400	5845	6764	6400	6832
GeoSD	1.317	1.373	1.426	1.313	1.325	1.321	1.313
LnGeoMean	8.885	8.962	9.148	8.673	8.819	8.764	8.829
LnGeoSD	0.2754	0.3173	0.3546	0.2726	0.2817	0.2782	0.2725

95% CI (profile likelihood)

A	560871090 to 680642584	1023001698 to	1278231773 to	14955379 to	245423311 to	290239582 to	585119865 to 660931638
GeoMean	7000 to 7443	7536 to 8094	9122 to 9696	5681 to 6024	6635 to 6897	6182 to 6631	6687 to 6981
GeoSD	1.275 to 1.359	1.328 to 1.423	1.386 to 1.470	1.280 to 1.35	1.304 to 1.34	1.287 to 1.36	1.289 to 1.339
LnGeoMean	8.854 to 8.915	8.927 to 8.999	9.118 to 9.179	8.645 to 8.70	8.800 to 8.83	8.729 to 8.79	8.808 to 8.851
LnGeoSD	0.2428 to 0.3069	0.2834 to 0.35	0.3261 to 0.38	0.2469 to 0.3	0.2656 to 0.2	0.2520 to 0.3	0.2539 to 0.2917

Goodness of Fit

Degrees of F	129	129	129	129	129	129	129
R squared	0.8235	0.8265	0.8847	0.8651	0.93	0.8038	0.9105
Sum of Squ	10198785199	33886839391	27766786218	6043750	681462262	3523323871	4961757101
Sy.x	8892	16208	14671	216.5	2298	5226	6202

Constraints

A	A > 0	A > 0	A > 0	A > 0	A > 0	A > 0	A > 0
GeoMean	GeoMean > 0	GeoMean > 0	GeoMean > 0	GeoMean > 0	GeoMean > 0	GeoMean > 0	GeoMean > 0
GeoSD	GeoSD > 1	GeoSD > 1	GeoSD > 1	GeoSD > 1	GeoSD > 1	GeoSD > 1	GeoSD > 1

Number of points

# of X values	132	132	132	132	132	132	132
# Y values a	132	132	132	132	132	132	132

Data Description: Fig. 2A- Data underlying representative autofluorescence emission spectra of PPT1 KO 7-month and WT 24-month brain fractions following discontinuous sucrose gradient ultracentrifugation and a second purification (Excitation = 370 nm).

Emission Wavelength	PPT1-7-5 320 mM - 1.0 M			PPT1-7-5 1.0 M - 1.2 M			PPT1-7-5 1.2 M - 1.4 M			PPT1-7-5 1.4 M - 1.5 M			WT-24-2 320 mM - 1.0 M			WT-24-2 1.0 M - 1.2 M			WT-24-2 1.2 M - 1.4 M			WT-24-2 1.4 M - 1.5 M		
400	5265	5146	5040	26864	25635	26373	4081	4089	3902	2691	2605	2563	3753	3737	3612	23680	23891	23926	3445	3352	3439	3484	3516	3599
405	6050	5824	5764	33227	31510	32912	4583	4600	4372	2808	2769	2738	4028	4079	3951	30234	30282	30302	3500	3464	3526	3587	3656	3680
410	6587	6383	6332	37597	35775	36967	5014	5046	4847	2922	2877	2801	4212	4343	4114	34891	35250	35240	3701	3598	3715	3657	3797	3739
415	6916	6693	6406	39678	38122	39311	5357	5452	5134	2993	2988	2912	4370	4262	4207	37820	38236	38024	3709	3676	3730	3739	3848	3889
420	6892	6647	6477	40031	38602	39506	5417	5382	5164	3045	2974	2936	4311	4331	4166	38488	38982	39041	3750	3580	3550	3699	3757	3783
425	6842	6546	6356	39509	37634	38474	5253	5383	5048	2991	2900	2852	4260	4268	4095	38080	38505	38601	3632	3577	3590	3617	3698	3741
430	6731	6581	6451	38909	37106	38245	5346	5494	5161	3035	2976	2934	4222	4164	4075	37820	38468	38464	3641	3565	3641	3537	3719	3714
435	6833	6615	6393	38871	36883	38183	5490	5495	5336	3142	3048	2958	4301	4215	4140	37982	38283	38229	3707	3656	3653	3677	3783	3815
440	6847	6666	6601	38539	36495	37621	5567	5620	5432	3154	3141	3030	4283	4277	4191	37707	37982	38046	3703	3756	3767	3855	3870	3817
445	6616	6290	6204	35237	33596	34514	5387	5507	5224	3144	3126	2962	4080	4074	4009	34250	34895	34766	3610	3505	3537	3568	3699	3729
450	5557	5271	5226	28096	26901	27636	4640	4721	4393	2756	2713	2592	3560	3510	3409	27109	27678	27475	3149	3079	3062	3193	3183	3172
455	4488	4327	4264	21603	20750	21151	3926	3919	3802	2264	2269	2194	2949	2852	2807	20517	20888	20923	2665	2573	2615	2625	2722	2700
460	3722	3599	3592	17173	16416	16869	3338	3415	3273	1942	1945	1910	2513	2467	2366	16191	16498	16319	2205	2214	2257	2271	2341	2270
465	3358	3237	3169	14447	13513	14038	3081	3132	2939	1772	1791	1729	2185	2078	2113	13138	13304	13246	2014	1948	1972	1990	2031	2072
470	3082	3028	2894	12323	11831	12179	2823	2876	2727	1723	1640	1579	1960	1978	1929	10925	11124	10893	1858	1798	1848	1873	1875	1885
475	2764	2709	2603	10937	10592	10788	2682	2737	2571	1582	1559	1539	1850	1836	1764	9271	9448	9327	1707	1709	1714	1751	1796	1728
480	2567	2572	2488	9887	9487	9738	2592	2642	2564	1498	1466	1387	1697	1700	1633	7891	8006	8042	1566	1631	1567	1613	1686	1637
485	2489	2422	2394	9182	8797	9012	2482	2532	2441	1424	1380	1277	1555	1579	1534	7146	7152	7111	1521	1509	1523	1540	1558	1529
490	2374	2295	2250	8406	8091	8193	2385	2427	2312	1294	1297	1258	1470	1448	1440	6183	6181	6152	1389	1373	1387	1412	1463	1449
495	2163	2115	2080	7819	7455	7649	2261	2290	2188	1223	1241	1202	1344	1363	1327	5443	5402	5503	1276	1284	1277	1299	1299	1328
500	2056	1976	1934	7170	6882	7079	2077	2191	2083	1133	1085	1061	1241	1212	1159	4726	4782	4781	1148	1161	1147	1151	1214	1192
505	1883	1798	1776	6757	6476	6605	2056	2016	1957	1013	985	971	1140	1066	1059	4246	4255	4296	1077	1024	1017	1069	1092	1097
510	1851	1803	1652	6260	6141	6259	1902	1904	1832	951	926	915	982	1027	1011	3870	3915	3960	999	989	942	982	1036	989
515	1709	1642	1641	5998	5694	5782	1787	1808	1703	869	898	823	937	955	916	3487	3532	3601	880	886	890	883	914	933
520	1534	1498	1544	5620	5184	5447	1674	1713	1604	830	770	728	839	830	859	3212	3128	3255	781	775	761	792	833	785
525	1443	1402	1356	5038	4853	4949	1581	1602	1426	739	709	688	755	742	719	2819	2831	2798	720	707	703	755	762	709
530	1359	1288	1282	4783	4511	4716	1536	1442	1426	672	637	635	694	670	662	2534	2601	2645	685	649	632	662	703	685
535	1214	1192	1181	4485	4312	4438	1330	1371	1401	618	598	568	639	646	575	2333	2399	2374	591	593	602	613	611	608
540	1108	1115	1111	4272	3946	4138	1343	1301	1251	612	557	556	569	581	562	2206	2190	2233	541	523	569	535	585	585
545	1047	1017	994	3855	3770	3787	1197	1195	1156	546	513	501	533	524	527	1937	2001	1990	493	497	493	496	495	491
550	1010	950	941	3643	3515	3605	1105	1107	1054	482	455	461	477	486	455	1777	1835	1789	450	434	446	421	470	474
555	898	850	812	3487	3339	3427	1063	1060	984	429	421	401	420	454	407	1657	1658	1649	376	373	399	405	385	416
560	819	813	793	3200	3090	3178	990	1060	983	398	364	359	400	363	384	1462	1517	1507	347	370	359	333	389	368
565	746	780	695	2925	2804	2873	924	967	829	349	376	342	355	347	374	1426	1368	1363	324	292	287	300	367	327
570	715	654	657	2738	2553	2597	823	873	802	338	316	289	319	314	315	1171	1221	1255	305	286	278	280	326	302
575	637	589	614	2542	2403	2474	722	787	767	299	269	264	304	282	270	1061	1033	1059	252	271	226	250	279	278
580	622	599	563	2412	2278	2375	752	770	705	275	254	263	275	257	267	1013	995	1033	250	229	234	234	217	254
585	528	514	487	2236	2055	2150	752	710	697	259	255	232	254	258	238	948	949	914	199	231	230	232	229	211
590	478	477	469	2114	1992	2027	618	629	666	263	225	226	239	232	210	834	850	849	208	215	170	207	194	194
595	436	438	434	1917	1756	1892	688	582	580	206	194	191	203	202	198	715	718	782	174	165	189	148	162	181
600	402	404	352	1795	1719	1719	573	598	518	201	164	198	175	188	181	659	650	649	136	172	152	152	139	168
605	408	354	444	1657	1626	1628	531	564	497	178	159	178	196	187	186	606	613	585	149	152	147	136	140	143
610	370	370	336	1590	1484	1490	427	460	461	172	153	143	121	138	152	559	513	524	121	116	135	127	146	142
615	429	388	378	1519	1433	1438	507	472	405	135	130	130	137	171	119	544	524	560	120	85	111	89	131	147
620	427	430	375	1410	1323	1404	404	434	413	125	115	129	158	124	112	475	497	450	122	92	110	71	91	109
625	489	397	469	1374	1440	1385	424	486	391	165	127	95	152	132	144	436	430	490	103	91	103	85	113	106
630	556	492	453	1356	1209	1308	501	364	402	124	113	109	148	115	115	429	389	452	111	90	85	75	136	115
635	400	392	383	1286	1121	1154	310	370	354	97	132	81	111	173	118	384	377	449	97	77	74	92	115	87
640	316	320	325	1106	1106	1104	395	351	298	79	118	110	96	84	76	284	275	340	60	52	86	45	74	84
645	250	214	256	1032	884	973	353	323	339	117	122	103	62	61	75	290	309	349	100	63	94	53	76	61
650	269	241	242	888	867	938	307	278	289	88	92	63	115	92	63	284	280	238	28	88	87	48	76	26
655	179	293	173	748	738	908	282	208	237	118	38	60	37	100	82	337	338	279	39	54	79	70	85	140
660	169	158	187	931	692	770	360	184	249	104	77	107	31	99	64	103	227	312	72	88	62	62	41	33
665	277	199	268	959	930	768	204	179	292	56	0	74	91	186	105	306	331	301	118	108	54	29	78	122
670	138	165	194	900	694	743	364	255	176	101	88	8	59	110	166	130	163	216	107	106	106	0	120	14
675	145	255	153	743	709	482	205	138	256	78	30	11	0	113	127	104	236	179	23	0	15	62	92	97
680	224	473	191	648	692	618	332	240	283	68	67	105	0	38	102	121	3	275	24	6	65	169	172	0
685	401	171	0	887	644	969	306	177	356	18	34	62	0	0	145	290	200	45	164	246	21	0	100	64
690	120	236	278	601	558	629	261	181	174	166	238	25	89	0	0	277	0	229	71	0	379	0	347	422
695	448	586	152	738	969	658	245	0	148	509	0	20	208	222	0	0	0	379	192	97	48	0	357	0
700	0	492	504	1108	571	485	49	94	150	0	65	0	148	194	37	48	424	223	318	182	160	0	266	17

Data Description: Fig. 2F - Data underlying quantification of SAP protein enrichment by immunoblotting of total brain and purified lipofuscin from PPT1 KO 7-month and WT 24-month animals.

Sample Name	SAP (10 kDa) Immunoblot Signal (A.U.)	Average of 2 Total Mouse Brains/Lipofuscin Replicate
PPT1-7-1-F Total	0.249	**0.357**
PPT1-7-1-M Total	0.465	
PPT1-7-3-F Total	0.188	**0.254**
PPT1-7-3-M Total	0.32	
PPT1-7-4-F Total	0.205	**0.153**
PPT1-7-4-M Total	0.101	
PPT1-7-5-F Total	0.332	**0.322**
PPT1-7-5-M Total	0.312	
PPT1-7-1 Lipofuscin	**0.415**	
PPT1-7-3 Lipofuscin	**0.393**	
PPT1-7-4 Lipofuscin	**0.394**	
PPT1-7-5 Lipofuscin	**0.729**	
WT-24-2-F Total	0.075	**0.07245**
WT-24-2-M Total	0.0699	
WT-24-3-F Total	0.0405	**0.02865**
WT-24-3-M Total	0.0168	
WT-24-4-M-1 Total	0.0375	**0.05095**
WT-24-4-M-2 Total	0.0644	
WT-24-5-M-1 Total	0.0605	**0.06685**
WT-24-5-M-2 Total	0.0732	
WT-24-2 Lipofuscin	**0.0582**	
WT-24-3 Lipofuscin	**0.0723**	
WT-24-4 Lipofuscin	**0.0485**	
WT-24-5 Lipofuscin	**0.0196**	

One-way ANOVA	Ordinary
Alpha	0.05

ANOVA summary	
F	18.95
P value	<0.0001
P value summary	****
Significant diff. among means (P < 0.05)?	Yes
R squared	0.8257

ANOVA table	SS	DF	MS	F (DFn, DFd)	P value
Treatment (between columns)	0.5116	3	0.1705	F (3, 12) = 18.95	P<0.0001
Residual (within columns)	0.108	12	0.009001		
Total	0.6197	15			

Tukey's multiple comparisons test	Mean Diff.	95.00% CI of diff.	Below thre	Summary	Adjusted P Value
PPT1-7 Total vs. PPT1-7 Lipofuscin	-0.2113	-0.4104 to -0.01208	Yes	*	0.0366
PPT1-7 Total vs. WT-24 Total	0.2168	0.01760 to 0.4159	Yes	*	0.0317
PPT1-7 Total vs. WT-24 Lipofuscin	0.2219	0.02268 to 0.4210	Yes	*	0.0278
PPT1-7 Lipofuscin vs. WT-24 Total	0.428	0.2289 to 0.6272	Yes	***	0.0002
PPT1-7 Lipofuscin vs. WT-24 Lipofuscin	0.4331	0.2339 to 0.6323	Yes	***	0.0002
WT-24 Total vs. WT-24 Lipofuscin	0.005075	-0.1941 to 0.2042	No	ns	0.9998

Data Description: Fig. S2C - Quantification of bright field SB3-stained granule images for particle circularity (n=3 biological replicates/genotype/age; n=5 images/replicate).

Descriptive Statistics						
	PPT1-2	PPT1-4	PPT1-7	WT-12	WT-18	WT-24
Number of values	8240	12690	4885	13703	9023	8065
Minimum	0.071	0.105	0.138	0.106	0.082	0.089
25% Percentile	0.648	0.591	0.581	0.489	0.473	0.513
Median	0.868	0.804	0.81	0.665	0.692	0.722
75% Percentile	1	0.9	0.902	0.832	0.857	0.862
Maximum	4.56	1	1	1	1	1
Range	4.489	0.895	0.862	0.894	0.918	0.911
Mean	0.9212	0.7371	0.7354	0.6512	0.6577	0.6804
Std. Deviation	0.4646	0.2029	0.2062	0.2066	0.2204	0.2113
Std. Error of Mean	0.005119	0.001801	0.002951	0.001765	0.00232	0.002353

Nested one-way ANOVA	
P value	0.347
P value summary	ns
Significantly different (P < 0.05)?	No
F, DFn, Dfd	1.247, 5, 12

Tukey's multiple comparisons test	Mean Diff.	95.00% CI o	Below thres	Summary	Adjusted P Value
PPT1-2 vs. PPT1-4	0.02059	-0.1712 to 0.	No	ns	0.999
PPT1-2 vs. PPT1-7	0.02359	-0.1684 to 0.	No	ns	0.998
PPT1-2 vs. WT-12	0.0776	-0.1142 to 0.	No	ns	0.749
PPT1-2 vs. WT-18	0.1165	-0.07536 to 0	No	ns	0.3763
PPT1-2 vs. WT-24	0.08149	-0.1104 to 0.	No	ns	0.7121
PPT1-4 vs. PPT1-7	0.003008	-0.1889 to 0.	No	ns	>0.9999
PPT1-4 vs. WT-12	0.05701	-0.1347 to 0.	No	ns	0.9097
PPT1-4 vs. WT-18	0.09594	-0.09590 to 0	No	ns	0.5676
PPT1-4 vs. WT-24	0.0609	-0.1309 to 0.	No	ns	0.8855
PPT1-7 vs. WT-12	0.054	-0.1379 to 0.	No	ns	0.9266
PPT1-7 vs. WT-18	0.09294	-0.09906 to 0	No	ns	0.5985
PPT1-7 vs. WT-24	0.05789	-0.1341 to 0.	No	ns	0.9049
WT-12 vs. WT-18	0.03893	-0.1529 to 0.	No	ns	0.9807
WT-12 vs. WT-24	0.00389	-0.1879 to 0.	No	ns	>0.9999
WT-18 vs. WT-24	-0.03505	-0.2269 to 0.	No	ns	0.9879

Data Description: Fig. S2D - Quantification of bright field SB3-stained granule images for particle size (Feret's Diameter; n=3 biological replicates/genotype/age; n=5 images/replicate).

Descriptive Statistics						
	PPT1-2	PPT1-4	PPT1-7	WT-12	WT-18	WT-24
Number of values	8240	12690	4885	13703	9023	8065
Minimum	0.312	0.312	0.312	0.312	0.312	0.312
25% Percentile	0.942	1.09	0.803	0.671	0.84	0.84
Median	1.23	1.33	1.41	0.949	1.29	1.38
75% Percentile	1.58	1.97	1.93	1.44	1.89	1.84
Maximum	5.73	5.8	4.64	5.89	5.23	5.48
Range	5.42	5.49	4.33	5.57	4.92	5.16
Mean	1.34	1.58	1.48	1.16	1.46	1.43
Std. Deviation	0.649	0.8	0.782	0.688	0.834	0.737
Std. Error of Mean	0.00715	0.0071	0.0112	0.00588	0.00878	0.0082

Nested one-way ANOVA	
P value	0.314
P value summary	ns
Significantly different (P < 0.05)?	No
F, DFn, Dfd	1.336, 5, 12

Tukey's multiple comparisons test	**Mean Diff.**	**95.00% CI of diff.**	**Below thre**	**Summary**	**Adjusted P Value**
PPT1-2 vs. PPT1-4	-0.2492	-0.7771 to 0.2788	No	ns	0.622
PPT1-2 vs. PPT1-7	-0.15	-0.6787 to 0.3787	No	ns	0.9242
PPT1-2 vs. WT-12	0.126	-0.4020 to 0.6540	No	ns	0.9618
PPT1-2 vs. WT-18	-0.09615	-0.6246 to 0.4323	No	ns	0.9881
PPT1-2 vs. WT-24	-0.08156	-0.6098 to 0.4467	No	ns	0.9943
PPT1-4 vs. PPT1-7	0.09915	-0.4293 to 0.6276	No	ns	0.9863
PPT1-4 vs. WT-12	0.3752	-0.1526 to 0.9029	No	ns	0.2341
PPT1-4 vs. WT-18	0.153	-0.3752 to 0.6812	No	ns	0.918
PPT1-4 vs. WT-24	0.1676	-0.3604 to 0.6956	No	ns	0.8855
PPT1-7 vs. WT-12	0.276	-0.2524 to 0.8045	No	ns	0.5254
PPT1-7 vs. WT-18	0.05386	-0.4750 to 0.5828	No	ns	0.9992
PPT1-7 vs. WT-24	0.06846	-0.4603 to 0.5972	No	ns	0.9975
WT-12 vs. WT-18	-0.2222	-0.7504 to 0.3060	No	ns	0.7196
WT-12 vs. WT-24	-0.2076	-0.7356 to 0.3204	No	ns	0.7693
WT-18 vs. WT-24	0.0146	-0.5138 to 0.5430	No	ns	>0.9999

Data Description: Fig. S3A, S3C - Quantification of cathepsin D (CATD) and LAMP1 lysosomal marker expression (mean gray value/mm^2) in hippocampal formation of 7-month PPT1 KO and 24-month WT mice. n = 4 sex-matched biological replicates; n = 4 sections averaged/replicate. Fig S3E, S3F - Quantification of CATD and (F) LAMP1 expression (mean gray value/mm^2) in MAP2 positive neurons (magenta) in PPT1 KO and WT primary cortical cultures at DIV14. n = 3 independent cultures; n = 5 neurons averaged/culture.

Fig. S3A - CATD Mean Gray Value (A.U.)/mm^2	
PPT1 KO-7	WT-24
39.886102	13.9354296
41.8852739	22.5572447
45.1056548	13.4922782
24.5197469	8.80915468

Unpaired t test	
P value	0.0051
P value summary	**
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=4.291, df=6

Fig. S3C - LAMP1 Mean Gray Value (A.U.)/mm^2	
PPT1 KO-7	WT-24
27.3452878	6.72516855
17.1444479	8.62600472
18.8662169	6.88084559
25.309714	7.98899545

Unpaired t test	
P value	0.0011
P value summary	**
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=5.833, df=6

Fig. S3E - CATD Mean Gray Value (A.U.)/µm^2	
PPT1 KO	WT
0.04269098	0.00602198
0.03886493	0.01115419
0.05240108	0.00549092

Unpaired t test	
P value	0.0011
P value summary	**
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=8.403, df=4

Fig. S3F - LAMP1 Mean Gray Value (A.U.)/µm^2	
PPT1 KO	WT
0.04723606	0.03258387
0.04833248	0.03074174
0.05747658	0.02688393

Unpaired t test	
P value	0.0046
P value summary	**
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=5.731, df=4

Data Description: Quantification of electron micrographs of (Fig. S4B) cytosolic GROD structures/cell, (Fig. S4C) percentage (%) of cytosolic area taken up by GROD structures, (Fig. S4D) number of lipid droplets per cell, (Fig. S4G) mitochondrial number per cell soma, (Fig. S4H) mitochondrial area in cell somas, in PPT1 KO 7-month and WT 24-month motor cortex and CA3 of hippocampus. (Fig. S4I) simple linear regression of Feret's diameter (maximum caliper) versus minFeret's diameter (minimum caliper) of mitochondria in PPT1 KO 7-month and WT 24-month motor cortex and CA3 of hippocampus.

Fig. S4B GRODs/Cell	
PPT1 KO-7	WT-24
0	0
32	0
28	4
49	2
9	9
4	3
2	10
9	1
1	2
3	4
4	2
7	1
1	3
17	0
10	2
22	3
9	16
21	2
6	6
0	1
2	2
5	7
5	1
0	3
3	1
1	11
26	
3	
8	
11	
27	
10	
22	
20	
14	
32	
31	
6	
2	
20	
9	

Unpaired t test ^	
P value	0.0008
P value sun	***
Significantly	Yes
One- or two	Two-tailed
t, df	t=3.512, df=65

Fig. S4C GROD Cytosolic Area	
PPT1 KO-7	WT-24
1.677914	7.323128
6.13644	2.038896
0.636507	1.050751
3.99834	3.136137
16.24603	1.050751
20.1202	0.439212
11.77503	11.09739
17.88268	3.889809
2.971011	5.821561
15.81289	2.11685
2.983705	6.947589
16.88737	25.52813
3.597059	5.422406
5.31182	2.404439
1.586479	1.773651
14.14681	0.807587
16.24323	25.92766
1.931961	2.663562
15.45066	12.80352
18.23447	4.672772
11.48117	10.05457
17.5	1.343738
18.67176	4.380646
11.24625	
5.249404	
17.40489	
18.6406	
6.781488	
0.823503	
17.83806	
14.60086	
17.5576	
1.253359	
10.68413	
8.643542	
23.8484	
10.96091	
13.04815	

Unpaired t test ^	
P value	0.0099
P value s	**
Significar	Yes
One- or tv	Two-tailed
t, df	t=2.664, df=59

Fig. S4D Lipid Droplets/Cell	
PPT1 KO-7	WT-24
0	5
0	2
0	26
0	0
0	0
0	0
0	3
0	0
0	3
0	0
0	0
0	0
0	0
0	2
0	0
0	1
0	0
0	1
0	4
0	0
0	2
0	10
0	6
0	7
0	1
0	3
0	
0	
0	
0	
0	
0	
0	
0	
0	
0	
0	
0	
0	
0	

Unpaired t test ^	
P value	0.0008
P value s	***
Significar	Yes
One- or tv	Two-tailed
t, df	t=3.499, df=65

Fig. S4G Mitochondria/Cell	
PPT1 KO-7	WT-24
25	17
19	21
13	30
19	17
15	4
17	18
15	7
16	4
12	1
17	5
3	2
7	4
27	10
31	19
30	15
12	8
7	10
17	10
8	4
6	26
7	5
5	18
2	3
2	2
9	1
5	19
3	4
9	3
3	13
4	9
11	
5	
15	
9	
4	
7	
7	
6	
10	
3	

Unpaired t test ^	
P value	0.6916
P value s	ns
Significar	No
One- or tv	Two-tailed
t, df	t=0.3984, df

Unpaired t test	
P value	0.0155
P value s	*
Significar	Yes
One- or tv	Two-tailed
t, df	t=2.425, df=754

Fig. S4H Mitochondrial	
PPT1 KO-7	WT-24
0.461	0.45
0.208	0.218
0.777	0.232
0.289	0.112
0.187	0.194
0.218	0.074
0.284	0.245
0.1	0.094
0.401	0.229
0.318	0.092
0.598	0.703
0.261	0.124
0.283	0.206
0.249	0.088
0.334	0.103
0.225	0.199
0.244	0.909
0.298	0.295
0.124	0.09
0.265	0.164
0.231	0.214
0.231	0.152
0.253	0.154
0.205	0.193
0.203	0.121
0.081	0.245

Fig. S4I Mitochondrial Morphology			
PPT1 KO-7		WT-24	
minFeret	Feret	minFeret	Feret
0.268	0.353	0.249	0.327
0.675	2.161	0.247	0.328
0.481	0.665	0.248	0.321
0.347	1.166	0.46	0.603
0.576	0.879	0.274	0.449
0.279	0.475	0.274	0.433
0.373	0.449	0.275	0.568
0.435	0.554	0.396	0.645
0.752	1.01	0.394	1.478
0.322	0.44	0.33	0.369
0.306	0.352	0.251	0.405
0.296	0.481	0.264	0.372
0.252	0.523	0.306	0.515
0.499	0.906	0.282	0.429
0.385	0.527	0.33	0.952
0.414	0.969	0.395	0.783
0.26	0.348	0.64	0.905
0.266	0.368	0.207	0.252
0.464	0.547	0.21	0.257
0.289	0.664	0.241	0.333
0.511	0.616	0.255	0.286
0.472	0.652	0.264	0.502
0.567	0.745	0.333	0.713
0.294	0.433	0.283	0.368
0.521	1.155	0.281	0.386
0.272	0.519	0.243	0.786
0.262	0.401	0.25	0.462
0.407	0.48	0.286	0.482
0.481	1.269	0.316	0.71
0.293	0.381	0.385	0.767
0.306	0.523	0.398	0.634

0.249	0.166
0.138	0.054
0.237	0.118
0.437	0.072
0.072	0.13
0.303	0.087
0.152	0.063
0.222	0.141
0.121	0.081
0.155	0.075
0.125	0.161
0.035	0.049
0.247	0.105
0.135	0.094
0.223	0.184
0.384	0.053
0.193	0.072
0.428	0.11
0.118	0.308
0.341	0.228
0.259	0.133
0.254	0.056
0.251	0.088
0.073	0.197
0.251	0.177
0.142	0.082
0.17	0.321
0.209	0.13
0.075	0.126
0.244	0.104
0.072	0.163
0.51	0.453
0.124	0.209
0.158	0.086
0.165	0.088
0.248	0.099
0.114	0.097
0.332	0.154
0.348	0.098
0.202	0.154
0.095	0.326
0.105	0.17
0.11	0.396
0.584	0.206
0.153	0.084

0.527	0.621	0.265	0.363
0.561	0.728	0.362	0.494
0.384	0.771	0.275	1.129
0.352	1.413	0.384	0.54
0.781	0.868	0.298	0.377
0.387	0.851	0.321	0.383
0.571	1.055	0.352	0.783
0.36	0.482	0.298	0.951
0.497	1.081	0.494	0.834
0.405	0.801	0.264	0.333
0.443	0.631	0.379	0.738
0.381	1.256	0.261	0.687
0.5	0.553	0.269	0.338
0.535	0.686	0.296	0.795
0.301	0.474	0.275	0.375
0.406	0.755	0.246	0.324
0.403	0.645	0.462	1.187
0.335	0.506	0.182	0.293
0.4	0.453	0.21	0.277
0.227	0.673	0.199	0.273
0.173	0.269	0.216	0.281
0.29	0.323	0.287	0.484
0.39	0.673	0.218	0.37
0.426	0.739	0.272	0.556
0.527	0.826	0.501	0.826
0.918	1.078	0.32	0.418
0.445	0.896	0.438	0.496
0.408	0.54	0.302	0.356
0.367	0.47	0.39	0.443
0.628	1.099	0.237	0.299
0.368	0.52	0.409	0.508
0.616	1.063	0.252	0.417
0.732	0.954	0.363	0.614
0.678	0.77	0.458	0.612
0.322	0.442	0.263	0.561
0.259	0.454	0.419	0.737
0.4	0.524	0.407	0.799
0.425	0.523	0.275	0.326
0.553	0.791	0.455	0.541
0.535	0.617	0.367	0.515
0.461	0.988	0.261	0.791
0.406	0.628	0.337	0.646
0.566	0.703	0.245	0.506
0.735	1.17	0.453	1.228
0.539	0.667	0.287	1.362

0.221	0.116
0.244	0.148
0.113	0.396
0.057	0.061
0.12	0.079
0.739	0.059
0.353	0.145
0.303	0.118
0.112	0.063
0.403	0.2
0.269	0.105
0.113	0.179
0.212	0.13
0.099	0.062
0.244	0.099
0.296	0.047
0.515	0.068
0.191	0.091
0.141	0.055
0.236	0.04
0.108	0.087
0.134	0.063
0.514	0.045
0.112	0.042
0.452	0.042
0.267	0.04
0.081	0.335
0.083	0.063
0.16	0.077
0.099	0.184
0.108	0.071
0.119	0.138
0.113	0.216
0.429	0.068
0.476	0.321
0.189	0.2
0.55	0.104
0.142	0.078
0.128	0.139
0.173	0.078
0.083	0.153
0.164	0.359
0.255	0.179
0.131	0.455
0.105	0.203

0.324	0.408	0.218	0.317
0.314	0.49	0.266	0.342
0.48	0.515	0.158	0.41
0.515	0.785	0.264	0.311
0.214	0.327	0.17	0.413
0.272	0.529	0.409	0.482
0.386	0.566	0.373	0.682
0.446	0.615	0.268	0.459
0.464	0.754	0.345	0.432
0.384	0.472	0.398	0.508
0.393	0.521	0.934	1.487
0.289	0.368	0.641	2.101
0.347	0.493	0.457	0.545
0.489	0.691	0.275	0.395
0.449	0.587	0.269	0.428
0.379	0.863	0.293	0.663
0.431	0.595	0.352	0.457
0.328	0.423	0.393	1.428
0.697	0.852	0.465	1.264
0.271	0.684	0.38	0.534
0.204	0.752	0.447	0.613
0.35	0.457	0.328	0.521
0.242	0.588	0.239	0.513
0.329	0.945	0.288	0.499
0.271	0.392	0.273	0.493
0.552	0.613	0.314	0.565
0.344	0.866	0.291	0.514
0.459	0.606	0.44	0.574
0.389	0.853	0.56	0.817
0.455	0.773	0.267	0.658
0.394	0.952	0.238	0.405
0.481	0.597	0.31	0.982
0.371	0.44	0.267	0.348
0.467	0.737	0.299	0.552
0.342	0.851	0.252	0.399
0.37	0.744	0.349	1.193
0.749	1.231	0.281	0.439
0.654	1.156	0.291	0.514
0.304	0.489	0.314	0.415
0.417	0.738	0.363	0.441
0.529	0.632	0.334	0.463
0.585	0.847	0.359	1.016
0.24	0.681	0.275	0.713
0.319	0.535	0.298	0.706
0.333	0.908	0.25	0.499

0.294	0.196
0.103	0.274
0.309	0.144
0.327	0.101
0.226	0.124
0.829	0.124
0.071	0.186
0.488	0.069
0.262	0.16
0.137	0.199
0.042	0.104
0.224	0.242
0.219	0.096
0.477	0.137
0.195	0.152
0.064	0.205
0.361	0.292
0.098	0.089
0.239	0.18
0.083	0.268
0.13	0.367
0.235	0.157
0.174	0.119
0.174	0.297
0.221	0.047
0.208	0.095
0.082	0.102
0.427	0.588
0.162	0.187
0.305	0.06
0.156	0.209
0.272	0.27
0.094	0.04
0.152	0.246
0.237	0.175
0.171	0.233
0.197	0.258
0.316	0.185
0.399	0.158
0.08	0.715
0.183	0.268
0.272	0.666
0.188	1.117
0.645	0.225
0.078	0.278

0.44	0.709	0.419	1.271
0.548	0.665	0.44	1.36
0.558	0.635	0.527	1.084
0.279	0.386	0.369	0.433
0.408	0.567	0.842	1.15
0.469	0.7	0.375	0.932
0.615	0.902	0.35	0.538
0.473	0.549	0.292	0.358
0.506	0.64	0.526	1.343
0.717	0.863	0.354	0.611
0.744	0.85	0.821	1.387
0.683	0.84	0.565	0.693
0.748	0.879	0.48	0.711
0.642	0.809	0.502	0.768
0.609	0.766	0.569	0.702
0.885	1.015	0.592	0.675
0.703	0.953	0.45	0.624
0.494	0.59	0.654	0.927
0.407	0.505	0.715	0.84
0.619	0.73	0.397	0.55
0.447	0.565	0.774	1.297
0.615	1.01	0.421	0.825
0.4	0.465	0.658	1.348
0.559	0.647	0.724	2.195
0.704	0.894	0.519	0.566
0.546	0.652	0.554	0.654
0.998	1.186	0.703	1.262
0.818	1.042	1.211	1.549
0.381	0.512	0.562	1.883
0.774	1.033	0.544	0.605
0.764	0.966	0.591	1.1
0.477	0.566	0.495	0.724
0.391	0.476	0.544	2.004
0.51	0.583	0.613	0.809
0.392	0.449	0.45	0.557
0.404	0.477	0.372	0.435
0.518	0.622	0.546	1.308
0.974	1.206	0.546	1.445
0.492	0.596	0.369	0.688
0.415	0.521	0.322	1.138
0.411	0.544	0.431	0.792
0.497	0.625	0.437	0.531
0.685	0.834	0.315	1.114
0.948	1.143	0.359	0.765
0.843	0.961	0.522	1.683

0.5	0.144
0.171	0.674
0.074	0.09
0.291	1.272
0.305	0.294
0.137	0.172
0.368	0.718
0.214	0.368
0.466	0.87
0.41	0.25
0.086	
0.193	0.421
0.109	0.306
0.096	0.502
0.243	0.239
0.126	0.246
0.182	0.269
0.122	0.068
0.233	0.162
0.295	0.274
0.055	0.771
0.148	0.115
0.103	0.319
0.187	0.375
0.146	0.078
0.323	0.097
0.095	0.278
0.1	0.293
0.395	0.195
0.206	0.292
0.105	0.115
0.078	0.15
0.094	0.217
0.306	0.118
0.135	0.101
0.133	0.117
0.165	0.121
0.106	0.079
0.121	0.452
0.176	0.512
0.14	0.115
0.14	0.27
0.266	0.773
0.17	0.46
0.278	0.468

0.731	0.786	0.494	0.783
0.5	0.667	0.374	0.985
0.731	0.881	0.365	0.741
0.392	0.435	0.325	1.041
0.756	0.879	0.437	0.598
0.371	0.421	0.462	0.789
0.367	0.468	0.543	0.941
0.709	0.905	0.319	0.472
0.451	0.519	0.199	0.292
1.044	1.105	0.383	1.323
0.704	0.921	0.52	0.707
0.369	0.504	0.237	0.517
0.562	0.801	0.288	0.316
0.728	1.243	0.39	0.492
0.531	0.683	0.38	0.618
0.817	0.948	0.247	0.421
0.986	1.192	0.421	0.82
0.408	0.642	0.465	0.55
0.402	0.506	0.261	0.491
0.277	0.364	0.385	0.53
0.19	0.258	0.268	0.443
0.255	0.486	0.343	0.544
0.411	0.496	0.36	0.598
0.545	0.703	0.261	0.491
0.347	0.675	0.445	1.408
0.456	0.857	0.349	0.501
0.761	0.917	0.188	0.298
0.415	0.549	0.242	0.327
0.337	0.414	0.338	0.387
0.319	0.419	0.367	0.416
0.294	0.461	0.44	0.536
0.535	0.653	0.373	0.517
0.338	0.448	0.429	0.587
0.467	0.885	0.379	0.444
0.542	0.947	0.393	0.706
0.446	0.549	0.28	0.367
0.349	0.442	0.345	0.391
0.263	0.468	0.32	0.486
0.285	0.348	0.47	0.555
0.31	0.352	0.362	0.609
0.35	1.142	0.347	0.506
0.423	0.524	0.361	0.5
0.242	0.355	0.523	2.691
0.692	0.916	0.501	0.774
0.553	0.701	0.492	0.688

0.287	0.558
0.113	0.255
0.103	0.265
0.314	0.135
0.193	0.065
0.137	0.132
0.105	0.894
0.218	0.128
0.059	0.161
0.158	0.288
0.112	0.333
0.118	0.047
0.26	0.268
0.113	0.522
0.177	0.089
0.107	0.095
0.858	0.121
0.196	0.459
0.538	0.139
0.269	0.13
0.236	0.128
0.303	0.128
0.157	0.084
0.253	0.092
0.179	0.098
0.1	0.096
0.546	0.128
0.295	0.054
0.125	0.083
0.26	0.122
0.151	0.1
0.129	0.086
0.244	0.245
0.096	0.164
0.155	0.032
0.07	0.443
0.036	0.076
0.392	0.091
0.125	0.387
0.076	0.089
0.117	0.064
0.137	0.099
0.158	0.204
0.086	0.096
0.308	0.067

0.264	0.432	0.3	0.393
0.333	0.45	0.287	0.622
0.718	0.869	0.276	0.67
0.476	0.661	0.298	0.426
0.29	0.392	0.347	0.483
0.36	0.412	0.385	0.423
0.632	0.793	0.538	0.589
0.409	0.501	0.499	1.102
0.358	0.468	0.372	1.428
0.321	0.506	0.443	0.577
0.336	0.385	0.416	1.15
0.367	0.54	0.392	1.954
0.437	0.904	0.292	0.406
0.291	0.513	0.328	0.504
0.309	0.477	0.276	0.491
0.454	0.622	0.445	1.312
0.584	0.732	0.411	1.021
0.41	0.544	0.477	0.868
0.371	0.609	0.339	1.12
0.319	0.577	0.304	0.834
0.297	0.868	0.436	0.866
0.371	0.514	0.308	0.383
0.446	0.661	0.33	0.389
0.398	0.663	0.342	0.491
0.471	0.946	0.413	0.58
0.405	0.586	0.221	0.465
0.266	0.434	0.299	0.625
0.474	0.626	0.362	1.314
0.533	0.927	0.429	1.587
0.42	0.824	0.309	0.51
0.355	0.491	0.329	0.553
0.31	0.653	0.32	0.508
0.248	0.32	0.308	0.404
0.396	0.551	0.181	0.385
0.478	0.935	0.329	0.404
0.304	0.631	0.361	0.623
0.336	0.512	0.277	0.364
0.273	0.369	0.308	0.377
0.303	1.082	0.327	0.387
0.36	0.959	0.287	0.424
0.515	1.419	0.251	0.362
0.487	0.689	0.3	0.389
0.312	0.926	0.28	0.34
0.588	2.635	0.334	0.912
0.546	0.616	0.374	0.579

0.204	0.124
0.235	0.357
0.161	0.095
0.486	0.158
0.06	0.31
0.11	0.579
0.159	0.068
0.09	0.117
0.135	0.132
0.287	0.086
0.155	0.087
0.364	0.122
0.191	0.102
0.447	0.12
0.144	0.128
0.282	0.07
0.454	0.2
0.262	0.117
0.891	0.234
0.624	0.149
0.156	0.102
0.644	0.23
0.56	0.054
0.261	0.146
0.21	0.37
0.08	0.436
0.144	0.037
0.174	0.172
0.234	0.33
0.253	0.099
0.135	0.302
0.426	0.09
0.148	0.164
0.191	0.12
0.242	0.165
0.118	0.1
0.25	0.329
0.881	0.1
0.127	0.177
0.482	0.346
0.224	0.053
0.497	0.265
0.485	0.122
0.16	0.169
0.18	0.106

0.255	0.311	0.288	0.618
0.432	0.605	0.454	0.818
0.501	0.723	0.173	0.276
0.389	0.49	0.404	0.523
0.324	0.519	0.378	0.812
0.332	0.418	0.296	0.363
0.354	1.162	0.284	0.436
0.539	0.677	0.285	0.379
0.309	0.422	0.275	0.423
0.548	0.719	0.171	0.284
0.486	0.746	0.325	0.368
0.332	0.595	0.205	0.386
0.417	0.702	0.252	0.364
0.346	0.374	0.316	0.618
0.383	0.473	0.229	0.785
0.331	1.179	0.231	0.659
0.324	0.701	0.279	0.573
0.224	0.454	0.245	0.291
0.286	0.42	0.337	0.636
0.217	0.319	0.259	0.567
0.313	0.435	0.35	0.678
0.368	0.479	0.274	0.494
0.422	0.597	0.208	0.321
0.29	1.088	0.35	0.782
0.18	0.554	0.304	0.711
0.489	0.634	0.185	0.308
0.201	0.273	0.262	0.441
0.535	0.585	0.646	0.905
0.646	0.727	0.446	0.747
0.781	1.1	0.496	0.686
0.414	0.532	0.195	0.404
0.689	0.853	0.212	0.661
0.295	0.358	0.221	0.742
0.48	0.594	0.532	1.214
0.45	0.568	0.292	0.58
0.314	0.464	0.18	0.948
0.396	0.51	0.446	0.967
0.261	0.662	0.315	0.637
0.371	0.417	0.295	1.473
0.402	0.468	0.444	0.491
0.305	0.466	0.399	1.143
0.254	0.487	0.367	0.771
0.306	0.434	0.35	0.524
0.342	0.596	0.413	0.536
0.338	0.484	0.362	0.499

0.428	0.213
0.168	0.292
0.883	0.201
0.509	0.175
0.246	0.131
0.469	0.05
0.385	0.14
0.436	0.167
0.141	0.274
0.346	0.076
0.346	0.283
0.822	0.182
0.668	0.18
0.698	0.187
0.63	
0.489	
0.272	
0.501	
0.446	
0.128	
0.565	
0.216	
0.262	
0.492	
0.903	
0.098	
0.45	
0.09	
0.112	
0.491	
0.106	
0.09	
0.246	
0.102	
0.175	
0.073	
0.05	
0.26	
0.086	
0.337	
0.123	
0.056	
0.162	
0.114	
0.168	

0.484	0.565	0.362	0.562
0.281	0.352	0.432	1.148
0.383	0.701	0.2	0.746
0.387	0.558	0.245	0.604
0.267	0.664	0.205	0.344
0.419	0.697	0.308	1.291
0.323	0.404	0.292	0.706
0.428	0.558	0.424	0.57
0.708	0.869		
0.71	0.883		
0.584	0.706		
0.532	0.741		
0.52	0.618		
0.662	0.93		
0.633	0.816		
0.441	0.491		
0.536	1.039		
0.393	0.524		
0.408	0.565		
0.455	0.567		
0.361	0.542		
0.275	0.394		
0.368	0.485		
0.24	0.317		
0.371	0.642		
0.427	0.589		
0.312	0.601		
0.19	0.431		
0.19	0.431		
0.475	0.801		
0.242	0.328		
0.376	0.535		
0.496	0.834		
0.252	0.605		
0.296	0.935		
0.26	0.404		
0.292	0.349		
0.233	1.002		
0.297	0.53		
0.311	0.926		
0.218	0.288		
0.319	0.53		
0.202	0.682		
0.347	1.351		
0.364	0.788		

0.095	
0.215	
0.394	
0.078	
0.07	
0.271	
0.134	
0.101	
0.201	
0.161	
0.195	
0.095	
0.045	
0.329	
0.076	
0.086	
0.084	
0.063	
0.109	
0.049	
0.049	
0.122	
0.043	
0.57	
0.138	
0.148	
0.167	
0.079	
0.057	
0.12	
0.197	
0.148	
0.208	
0.062	
0.057	
0.517	
0.12	
0.193	
0.917	
0.08	
0.283	
0.152	
0.062	
0.069	
0.188	

0.241	0.268
0.426	1.962
0.331	0.474
0.369	2.274
0.345	0.562
0.361	0.406
0.278	0.333
0.304	0.93
0.315	0.424
0.684	0.937
0.286	0.467
0.335	0.491
0.334	1.749
0.241	0.55
0.323	0.363
0.368	0.885
0.334	0.674
0.544	0.776
1	1.671
0.473	0.523
0.285	0.4
0.294	0.905
0.252	0.462
0.315	0.882
0.231	0.504
0.303	0.751
0.319	1.251
0.258	0.782
0.238	0.415
0.227	0.303
0.37	0.485
0.448	0.601
0.22	0.768
0.176	0.476
0.243	0.602
0.277	0.396
0.274	0.951
0.377	1.134
0.295	0.38
0.273	0.387
0.263	0.362
0.504	1.061
0.219	0.529
0.313	0.551
0.347	0.723

0.542	
0.065	
0.109	
0.106	
0.221	
0.148	
0.075	
0.132	
0.095	
0.074	
0.178	
0.084	
0.169	
0.088	
0.273	
0.143	
0.117	
0.16	
0.419	
0.269	
0.157	
0.083	
0.22	
0.09	
0.168	
0.168	
0.166	
0.137	
0.047	
0.213	
0.086	
0.627	
0.281	
0.219	
0.056	
0.127	
0.197	
0.212	
0.118	
0.206	
0.179	
0.106	
0.311	
0.25	
0.268	

0.295	0.389
0.323	0.499
0.282	0.702
0.341	0.579
0.3	0.804
0.235	0.393
0.292	0.47
0.267	0.683
0.443	0.495
0.443	1.277
0.315	0.42
0.269	0.42
0.32	1.269
0.301	0.789
0.445	1.756
0.43	0.694
0.322	1.037
0.388	0.815
0.533	0.659
0.369	0.794
0.41	0.665
0.755	2.807
0.259	0.983
0.315	0.406
0.203	0.323
0.357	0.467
0.297	0.957
0.334	0.418
0.285	0.419
0.255	0.437
0.356	0.585
0.427	0.516
0.471	0.804
0.358	0.432
0.523	0.675
0.427	0.459
0.373	0.438
0.397	0.535
0.336	0.776
0.271	1.094
0.322	0.407
0.443	0.714
0.509	0.813
0.181	0.339
0.227	0.37

0.279	
0.105	
0.19	
0.259	
1.169	
0.09	
0.219	
0.151	
0.232	
0.148	
0.196	
0.19	
0.077	
0.275	
0.131	
0.318	

0.218	0.261
0.202	0.557
0.254	0.335
0.271	0.387
0.446	1.73
0.419	0.746
0.231	0.411
0.37	1.143
0.441	0.79
0.212	0.334
0.402	1.338

Simple Linear Regression of Mitochondrial Morphology			
	Feret PPT1-7	Feret WT-24	Perfectly Circular
Best-fit values			
Slope	1.018	1.675	1
Y-intercept	0.2587	0.07064	0
X-intercept	-0.2542	-0.04219	0
1/slope	0.9828	0.5972	1

Std. Error		
Slope	0.08176	0.1296
Y-intercept	0.03651	0.04989

95% Confidence Intervals		
Slope	0.8568 to 1.178	1.420 to 1.929
Y-intercept	0.1869 to 0.3304	-0.02754 to 0.1688
X-intercept	-0.3831 to -0.1597	-0.1180 to 0.01439

Goodness of Fit			
R squared	0.2582	0.3524	1
Sy.x	0.2724	0.2968	

Is slope significantly non-zero?		
F	154.9	167
DFn, DFd	1, 445	1, 307
P value	<0.0001	<0.0001
Deviation from zero?	Significant	Significant

Equation	Y = 1.018*X + 0.2587	Y = 1.675*X + 0.070	Y = 1.000*X + 0.0

Data			
Number of X values	447	756	758
Maximum number of Y replicates	1	1	1
Total number of values	447	309	2
Number of missing values	0	447	756

Data Description: Fig. S5 - (A) PPT1 enzyme activity in CRISPR-engineered HEK293T PPT1 KO cells and WT controls normalized to protein concentration (µg) determined by BCA (n = 2 independent cultures). (B) Mitochondrial stress test with nutrient-deprivation performed on control (WT) and CRISPR-engineered PPT1 KO HEK293T cells, with sequential injections of mitochondrial inhibitors, (i) oligomycin A, (ii) FCCP, and (iii) rotenone/antimycin A, to determine effects on oxygen consumption rate (OCR). OCR measurements are normalized to cell number (per thousand cells) in each well. Parameters calculated from this metabolic flux signature are shown in the following panels. (C) Basal respiration. (D) ATP production. (E) Coupling efficiency percent (%) (ATP production/basal respiration). (F) Extracellular acidification rate (ECAR) with mitochondrial inhibitor injections as in panel A. (G) Proton leak. (H) Maximal respiration. (I) Percentage of spare respiratory capacity (%) (maximal respiration/basal respiration). Data are representative results from one of two independent

Fig. S5A PPT1 Enzyme Activity

PPT1 KO	WT
5.283948	139.5505
2.388439	155.3892

Unpaired t test

P value	0.0031
P value summary	**
Significantly diff	Yes
One- or two-tailed	Two-tailed
t, df	t=17.84, df=2

Fig. S5B Mitochondrial Function

Inhibitor Readings	Time (minutes)	WT								PPT1 KO							
Basal	1.5548	5.141125	4.427539	5.028994	5.938265	5.253732	5.771533	5.816628	6.184506	6.424652	5.886748	3.888131	4.746207	4.487305	4.501305	5.27073	3.882195	4.750483	5.010099	4.314784
Basal	8.432591	5.393998	4.932979	5.252146	6.172173	5.415645	6.119099	6.205934	6.36191	6.793014	6.452408	4.13404	5.031135	4.629655	4.829196	5.621313	3.99757	5.014902	5.492575	4.390994
Basal	15.310365	5.408467	4.813197	5.290091	6.162162	5.43836	6.156092	6.146423	6.260074	6.732443	6.348003	4.149609	5.019208	4.575895	4.841759	5.584183	4.030386	4.957893	5.209409	4.330765
Basal	22.182195	5.431172	4.862947	5.22828	6.154672	5.41608	6.11888	5.993907	6.165856	6.654171	6.312161	4.142997	4.943583	4.538368	4.841158	5.472473	3.966834	4.926839	5.340923	4.418075
Basal	29.057732	5.375166	4.851924	5.229283	6.133854	5.408414	6.075915	5.929627	6.093726	6.558315	6.225812	4.140201	4.862585	4.46562	4.859736	5.367888	4.025201	4.826613	5.270383	4.388581
Basal	36.028835	5.274035	4.966319	5.231804	6.252649	5.375306	6.231086	6.203485	6.398725	6.694064	6.395848	4.13846	4.970146	4.615215	4.779256	5.537669	3.901908	5.030217	5.282448	4.397992
Basal	42.90363	5.24486	4.850369	5.184647	6.069574	5.374946	5.998259	5.906379	6.208458	6.429805	6.148953	4.092674	4.719928	4.39972	4.711748	5.348578	4.013227	4.982495	5.156894	4.368596
Basal	49.776943	5.330024	4.89979	5.198621	6.004092	5.298377	5.921867	5.81402	6.183034	6.371041	6.074159	4.157731	4.735199	4.328544	4.831652	5.219622	4.039662	4.813328	5.212375	4.359871
Basal	56.65878	5.416626	4.96505	5.257089	5.988108	5.295921	5.867373	5.762358	6.170556	6.323784	6.019451	4.109274	4.742842	4.300783	4.795703	5.166225	4.001554	4.790193	5.185874	4.314224
Basal	63.533586	5.352843	4.921842	5.282755	5.987763	5.390394	5.833199	5.871734	6.230189	6.282105	5.986781	4.120824	4.681605	4.282486	4.748292	5.092532	4.018242	4.70599	5.151875	4.310944
Oligomycin A	70.48912	1.713257	1.653375	1.627484	1.911369	1.850062	1.834656	2.013825	2.153368	2.150625	1.970638	1.453048	1.777217	1.647956	1.689872	2.071521	1.30024	1.803928	1.850372	1.51516
Oligomycin A	77.36688	1.668242	1.456386	1.546865	1.849446	1.715895	1.808288	1.921454	1.977306	2.089269	1.891502	1.446214	1.710983	1.614147	1.706477	1.923986	1.405569	1.718722	1.79421	1.535718
Oligomycin A	84.243898	1.719112	1.500592	1.568861	1.790293	1.722195	1.767171	1.83826	1.959484	1.979473	1.82114	1.543311	1.697262	1.59152	1.843161	1.949526	1.486473	1.745564	1.945783	1.719594
FCCP	91.199434	5.88262	4.587312	4.842783	7.350376	5.120351	6.807537	6.963051	4.935904	6.801084	6.361713	1.275588	6.141824	5.201373	6.143703	7.085263	4.547697	6.073191	7.653149	5.250756
FCCP	98.084606	4.235713	3.416584	3.837682	5.282964	2.975201	4.644012	4.829969	3.686152	5.018266	4.802965	0.948473	4.113326	3.633296	4.470194	4.809279	3.141945	4.304125	4.702555	3.840453
FCCP	104.965712	3.881857	3.27436	3.49508	4.896813	1.88567	4.39176	4.680642	3.30822	4.921523	4.70509	0.918747	4.066988	3.575745	4.411646	4.546758	3.101533	4.21025	4.410196	4.109455
Rotenone/Antimycin A	111.929756	1.502791	1.288966	1.416621	1.710767	1.613731	1.697477	1.69339	1.786635	1.932908	1.706377	0.932522	1.805259	1.459841	2.049472	1.89033	1.738088	1.736414	1.502458	1.675655
Rotenone/Antimycin A	118.805665	1.535797	1.417128	1.212308	1.551912	1.387858	1.512072	1.583979	1.554614	1.773473	1.616214	0.851002	1.405954	1.304481	1.456347	1.602538	1.138735	1.496997	1.328781	1.358531
Rotenone/Antimycin A	125.676039	1.450692	1.311379	1.196438	1.471726	1.267571	1.429299	1.438003	1.446584	1.67044	1.431642	0.811532	1.306007	1.189651	1.339302	1.484168	1.062073	1.382876	1.253917	1.303544

Fig. S5C Basal Respiration

PPT1 KO	WT
3.33	3.92
3.56	3.54
3.28	4.03
3.52	4.66
3.88	4.14
2.96	4.65
3.44	4.49
4.02	4.65
3.09	4.89
	4.79

Unpaired t test

P value	0.0001
P value summary	***
Significantly diff	Yes
One- or two-tailed	Two-tailed
t, df	t=5.038, df=17

Fig. S5D ATP Production

PPT1 KO	WT
2.67	3.63
2.97	3.42
2.67	3.71
3.04	4.2
3.17	3.67
2.61	4.07
2.99	4.03
3.36	4.27
2.78	4.3
	4.17

Unpaired t test

P value	<0.0001
P value summary	****
Significantly diff	Yes
One- or two-tailed	Two-tailed
t, df	t=7.821, df=17

Fig. S5E Coupling Efficiency

PPT1 KO	WT
80.82	93.12
88	94.76
86.27	90.89
89.23	92.95
87.81	88.97
88.38	92.33
89.89	90.97
86.14	89.28
92.28	93.3
	91.45

Unpaired t test

P value	0.0025
P value summary	**
Significantly diff	Yes
One- or two-tailed	Two-tailed
t, df	t=3.542, df=17

Fig. S5F Extracellular Acidification Rate (ECAR)

Inhibitor Readings	Time (minutes)	WT								PPT1 KO							
Basal	1.5548	1.131875	1.337621	1.512527	1.398202	1.446554	1.40857	1.469507	1.527894	1.453387	1.488276	1.54411	1.706906	1.726846	2.183631	1.912031	2.07432	1.850591	2.121297	2.110326
Basal	8.432591	0.901197	1.214864	1.333515	1.248067	1.268457	1.265469	1.30355	1.369339	1.293051	1.338296	1.454757	1.54552	1.580475	2.065986	1.796729	2.006538	1.738122	2.035927	2.017652
Basal	15.310365	0.865169	1.197112	1.291489	1.211299	1.263488	1.252737	1.270018	1.345092	1.24679	1.292876	1.439804	1.4901	1.57981	2.076982	1.799675	1.952446	1.726633	2.038095	2.020383
Basal	22.182195	0.894231	1.183671	1.27722	1.205729	1.251058	1.23495	1.258799	1.308813	1.241733	1.276254	1.43825	1.49269	1.576334	2.033314	1.767494	1.951411	1.737348	2.005397	1.973157
Basal	29.057732	0.901331	1.207496	1.280057	1.212296	1.240115	1.248814	1.258952	1.328268	1.251533	1.285581	1.433512	1.50446	1.588832	2.042785	1.780553	1.974368	1.751813	2.027808	1.992236
Basal	36.028835	0.893322	1.19409	1.241771	1.202982	1.214306	1.309252	1.321271	1.300665	1.263438	1.347281	1.373547	1.423731	1.576437	2.044811	1.853086	1.886176	1.739562	2.046356	1.982584
Basal	42.90363	0.936514	1.198374	1.249967	1.194782	1.229298	1.261067	1.279805	1.298332	1.23991	1.30721	1.396111	1.470002	1.564673	2.021603	1.82921	1.922303	1.760732	2.047531	1.971595
Basal	49.776943	0.950844	1.222779	1.268022	1.200847	1.252881	1.255276	1.272925	1.31696	1.24359	1.293689	1.399989	1.493921	1.572541	2.042091	1.830275	1.940822	1.743924	2.032616	1.970561
Basal	56.65878	0.947554	1.220292	1.268444	1.21657	1.242398	1.24607	1.256897	1.316989	1.252201	1.283714	1.398848	1.511745	1.580192	2.021712	1.833733	1.952884	1.744303	2.038386	2.012328
Basal	63.533586	0.947755	1.217015	1.282221	1.223051	1.263491	1.245135	1.256669	1.331832	1.250865	1.275945	1.413215	1.512338	1.577282	2.051779	1.838057	1.954841	1.737738	2.037322	1.958927
Oligomycin A	70.48912	1.237017	1.646961	1.780248	1.666661	1.740376	1.750447	1.779273	1.791397	1.649779	1.764989	1.72538	1.836431	1.910317	2.541671	2.276595	2.423638	2.175309	2.529892	2.364534
Oligomycin A	77.36688	0.937664	1.120625	1.179	1.059925	1.162386	1.07392	1.135359	1.175723	1.080901	1.158247	1.567873	1.657363	1.680849	2.274801	1.997534	2.236809	1.888432	2.292029	2.21809
Oligomycin A	84.243898	0.835562	1.000909	1.076357	0.997071	1.059251	1.015465	1.051085	1.105009	1.029574	1.065261	1.534833	1.615705	1.634919	2.224083	1.915503	2.164987	1.83063	2.275743	2.208647
FCCP	91.199434	1.065006	1.313525	1.404512	1.452768	1.437882	1.498605	1.517478	1.409252	1.448176	1.491111	1.44145	1.84901	1.996742	2.632796	2.373053	2.488792	2.288325	2.646363	2.462104
FCCP	98.084606	1.098811	1.251377	1.315559	1.306848	1.312166	1.288413	1.33601	1.318323	1.289011	1.363141	1.411	1.795344	1.847059	2.454073	2.183041	2.334899	2.076346	2.471109	2.320638
FCCP	104.965712	1.097704	1.250965	1.288929	1.263433	1.185972	1.234206	1.296148	1.260805	1.26171	1.324334	1.385073	1.774281	1.794059	2.401279	2.120684	2.289173	2.019342	2.419658	2.320314
Rotenone/Antimycin A	111.929756	0.855739	1.076871	1.089348	1.050792	1.145235	1.052174	1.102472	1.144565	1.077282	1.116889	1.406964	1.505942	1.56734	2.306337	1.893444	2.157789	1.802599	2.148028	2.044126
Rotenone/Antimycin A	118.805665	0.814797	1.040033	1.060274	0.992614	1.096563	0.996585	1.062522	1.093436	1.008706	1.072667	1.381416	1.552134	1.547352	2.196186	1.836649	2.058455	1.72413	2.102148	2.022849
Rotenone/Antimycin A	125.676039	0.757953	1.015276	1.037145	0.971333	1.068606	0.977913	1.03183	1.063201	0.982584	1.032969	1.365342	1.528211	1.549411	2.15249	1.79653	2.052765	1.69082	2.067983	2.04369

Fig. S5G Proton Leak

PPT1 KO	WT
0.63	0.27
0.4	0.19
0.42	0.37
0.37	0.32
0.44	0.45
0.34	0.34
0.34	0.4
0.54	0.51
0.23	0.31
	0.39

Unpaired t test

P value	0.2484
P value summary	ns
Significantly diff	No
One- or two-tailed	Two-tailed
t, df	t=1.195, df=17

Fig. S5H Maximal Respiration

PPT1 KO	WT
*	4.43
4.84	3.28
4.01	3.65
4.8	5.88
5.6	3.85
3.49	5.38
4.69	5.53
6.4	3.49
3.95	5.13
	4.93

* Removed well due to technical drug injection is

Unpaired t test

P value	0.7125
P value summary	ns
Significantly diff	No
One- or two-tailed	Two-tailed
t, df	t=0.3751, df=16

Fig. S5I Spare Respiratory Capacity %

PPT1 KO	WT
*	113.58
143.26	90.73
129.71	89.23
140.93	130.17
155.23	93.45
117.91	122.12
141.14	124.61
164.17	72.94
131.25	111.25
	108.23

* Removed well due to technical drug injection issue

Unpaired t test

P value	0.0005
P value summary	***
Significantly diff	Yes
One- or two-tailed	Two-tailed
t, df	t=4.357, df=16

Data Description: Fig. 3F - Percent (%) abundance of top 25 most abundant lipofuscin proteins (UniProt ID) across all conditions.

	PPT1-2-1	PPT1-2-2	PPT1-2-3	PPT1-4-1	PPT1-4-2	PPT1-4-3	PPT1-7-1	PPT1-7-3	PPT1-7-4	WT_12_1	WT_12_2	WT_12_3	WT-18-1	WT-18-2	WT-18-3	WT-24-1	WT-24-2	WT-24-3
ATPB	4.470048	4.64767	4.415572	3.953146	4.492233	4.528157	5.182466	5.180639	5.034145	4.805805	4.256674	4.962112	4.591239	4.550415	4.561714	4.327858	4.599767	4.514903
MDHM	3.805551	4.12742	3.773406	4.06803	4.472344	4.104663	4.092931	4.139213	1.716614	3.84955	3.644272	3.414651	3.650573	3.298947	3.336076	3.084615	3.349794	3.270628
ACON	3.833924	4.066397	3.844386	3.439624	3.755147	3.660868	4.020502	3.887464	1.938215	3.374711	2.769652	3.136923	3.27707	3.485061	3.488838	3.323401	3.593507	3.464245
VDAC1	2.372546	2.7101	2.507416	2.231965	2.296702	2.28226	2.751362	2.769192	2.606127	2.636805	2.648984	2.772356	2.181794	2.134867	2.173343	2.039379	2.116153	2.129351
AT1A3	2.057102	1.962205	1.96049	2.493995	2.208245	2.294877	1.773937	1.740333	2.773887	2.025112	2.544693	2.485887	1.795164	1.710464	1.67156	1.78081	1.551748	1.625399
MBP	0.857327	0.518749	0.76091	1.604887	1.386269	1.656474	1.074487	1.145246	6.416807	4.076498	2.937583	2.841512	2.299107	1.581108	1.661981	1.38058	1.620666	1.791193
ADT1	1.917226	2.086546	2.043228	1.825824	2.002096	1.924002	2.302468	2.387054	2.252	2.104459	2.040011	2.159947	1.189439	1.224097	1.219249	1.149865	1.251841	1.218987
EAA2	1.701772	1.70869	1.569674	2.064045	1.89383	1.773962	1.550029	1.611851	2.662406	1.585665	1.994184	2.212591	1.83799	1.487766	1.478496	1.597998	1.414864	1.440024
SPTN1	1.421317	1.58385	1.714174	1.55613	1.489087	1.52083	1.512779	1.72157	2.067664	2.055497	1.981604	1.770146	1.304918	1.371146	1.36132	1.347721	1.354688	1.406699
DHE3	1.429136	1.497177	1.508644	1.39363	1.733182	1.640657	1.997205	2.022635	1.009908	1.365296	1.188204	1.148467	1.381057	1.557025	1.579495	1.576263	1.709817	1.662652
MYPR	0.708645	0.508801	0.712362	1.639163	1.348213	1.596873	1.160884	1.3479	4.504801	2.907843	1.823221	1.973996	1.422978	1.106424	1.177848	0.982503	1.172926	1.287271
AATM	1.468354	1.625467	1.55581	1.52013	1.587626	1.455824	1.41593	1.47764	0.677313	1.469921	1.306672	1.240602	1.35691	1.450753	1.50887	1.39686	1.514018	1.525383
QCR2	1.155023	1.205884	1.061715	1.024843	1.047556	1.013785	1.245937	1.355447	1.086685	1.458691	1.23581	1.368861	1.032589	1.072851	1.09897	1.026164	1.070067	1.058647
HXK1	1.070619	1.117288	0.975021	1.07625	1.138984	1.093887	1.132048	1.114471	0.915486	1.13848	1.143111	1.209301	1.073753	1.077793	1.088652	0.992254	1.004857	1.030537
QCR1	0.983283	1.012616	0.975168	1.055847	1.10297	1.092105	1.11128	1.126081	1.076728	1.488887	1.239899	1.273876	0.720875	0.876289	0.837957	0.790166	0.847592	0.830559
AT1A2	0.98615	0.939592	0.967128	1.09463	0.993359	1.018722	1.046145	1.08788	1.599642	1.11923	1.306966	1.357874	0.816285	0.806183	0.813306	0.866965	0.776171	0.790208
G3P	0.90563	0.874214	0.879096	1.20264	1.1162	1.152538	0.981782	0.958378	0.989159	0.146452	0.193525	0.151575	1.427446	1.309509	1.348739	1.413153	1.203435	1.264051
CLH1	1.101324	1.093619	1.1021	1.182336	1.144016	1.143052	0.848952	0.773586	0.592404	0.530048	0.652779	0.608569	1.035237	1.044566	1.014965	1.098224	0.97474	0.966562
AT1B1	1.049009	0.929167	0.997639	1.078702	1.0193	1.020964	0.96206	0.879279	1.201483	0.880129	1.049906	0.969608	0.75663	0.759532	0.767584	0.776198	0.709488	0.735926
SYN1	0.842601	0.805063	0.805928	0.821423	0.777874	0.764361	0.629464	0.595145	0.655836	0.738063	1.012797	0.858385	1.171628	0.996313	0.989682	1.015937	1.004752	0.958301
STXB1	0.855338	0.751258	0.752565	0.930437	0.869065	0.868555	0.684707	0.645972	0.754062	0.726421	0.855512	0.952479	0.949863	0.909736	0.903445	0.95112	0.839198	0.867366
VDAC2	0.840519	0.828814	0.772467	0.75114	0.778668	0.775501	0.939152	0.904168	0.874556	0.812112	0.879371	0.870483	0.724478	0.710332	0.725155	0.660751	0.708725	0.684206
DPYL2	0.736974	0.612323	0.694483	0.886356	0.835882	0.865996	0.636719	0.555333	0.679152	0.651087	0.861928	0.69677	0.866306	0.855292	0.81136	1.009472	0.879877	0.873546
S2512	0.659806	0.724622	0.672422	0.749995	0.767826	0.757526	0.868946	0.885212	0.827719	0.977207	0.882382	0.889433	0.637767	0.66328	0.676229	0.623208	0.677923	0.683934
KCRB	0.9202	0.885052	1.009618	0.916962	0.804248	0.852765	0.571204	0.581806	0.474211	0.400799	0.635884	0.500794	0.967103	0.75662	0.734799	0.893131	0.771558	0.766505

Data Description: Fig. 3G - Annotation of consensus lipofuscin proteomes for each genotype (PPT1-2-4-7: n = 745; WT-12-18-24: n = 957) by primary localization in the Human Protein Atlas (60). Fold-change comparisons represent number of detected proteins per category/total detected proteins in lipofuscin versus whole brain ratio in Human Protein Atlas.

	Human Protein Atlas Gene Number	% Representation in Human Protein Atlas (# of proteins in annotation/total)	PPT1-2-4-7 Lipofuscin Consensus Annotated Genes	WT-12-18-24 Lipofuscin Consensus Anotated Genes	% Representation in PPT1-2-4-7 Lipofuscin Consensus proteome (# of annotated proteins/total)	% Representation in WT-12-18-24 Lipofuscin Consensus proteome (# of annotated proteins/total)	PPT1-2-4-7 %/ Human Protein Atlas %	WT-12-18-24 %/ Human Protein Atlas %	**PPT1-2-4-7 Log10 Fold Change**	**WT-12-18-24 Log10 Fold Change**
Nucleoplasm	6773	30.21	148	169	19.87	20.71	0.658	0.584	-0.182	-0.233
Nucleoli	1425	6.36	26	36	3.49	4.41	0.549	0.592	-0.260	-0.228
Nuclear Membrane	276	1.23	9	11	1.21	1.35	0.981	0.934	-0.008	-0.030
Cytosol	4957	22.11	228	258	30.60	31.62	1.384	1.219	0.141	0.086
Mitochondria	1121	5.00	195	187	26.17	22.92	5.234	3.908	0.719	0.592
Centrosome	582	2.60	22	26	2.95	3.19	1.137	1.046	0.056	0.020
Microtubules	464	2.07	17	19	2.28	2.33	1.102	0.959	0.042	-0.018
Intermediate filaments	163	0.73	9	8	1.21	0.98	1.661	1.150	0.220	0.061
Actin filaments	357	1.59	19	23	2.55	2.82	1.601	1.509	0.205	0.179
Golgi Apparatus	1163	5.19	18	26	2.42	3.19	0.466	0.524	-0.332	-0.281
Endoplasmic Reticulum	542	2.42	20	42	2.68	5.15	1.110	1.815	0.045	0.259
Vesicles	2308	10.30	79	96	10.60	11.76	1.030	0.974	0.013	-0.011
Plasma Membrane	2286	10.20	126	160	16.91	19.61	1.659	1.639	0.220	0.215
Total Proteins in Dataset	22417		745	957						

Data Description: Fig. 3H - Annotation of mitochondrial proteins in consensus lipofuscin proteomes for each genotype (PPT1 KO: n = 250/745; WT: n = 296/957) and mitochondrial isolates from different brain regions by mitochondrial sub-organellar localization in MitoCarta 3.0 (61). MOM: mitochondrial outer membrane; IMS: intermembrane space; MIM: mitochondrial inner membrane. Ratio of proteins from each sub-organellar compartment/total proteins were compared by unpaired two-tailed t-test for lipofuscin vs. mitochondrial isolates from brain (* p < 0.05, ** p < 0.01, *** p < 0.001).

	Mitochondrial Subcompartment - # Annotated Proteins						
	IMS	Matrix	Unknown	MOM	MIM	Membrane	Total #
Cerebrum	26	339	26	65	263	16	735
Cerebellum	23	315	22	65	251	15	691
Brainstem	20	316	26	67	249	15	693
Spinalcord	26	352	27	65	269	16	755
MitoCarta 3.0	52	528	56	110	354	37	1137
PPT1-2-4-7 Lipofuscin Consensus	4	108	6	22	106	4	250
WT-12-18-24 Lipofuscin Consensus	4	116	10	32	128	6	296

Ratio of Subcompartment Proteins to Total Mitochondrial Proteins in Dataset					
IMS/Total	Matrix/Total	Unknown/Total	MOM/Total	MIM/Total	Membrane/Total
0.0354	0.4612	0.0354	0.0884	0.3578	0.0218
0.0333	0.4559	0.0318	0.0941	0.3632	0.0217
0.0289	0.4560	0.0375	0.0967	0.3593	0.0216
0.0344	0.4662	0.0358	0.0861	0.3563	0.0212
0.0457	0.4644	0.0493	0.0967	0.3113	0.0325
0.0160	0.4320	0.0240	0.0880	0.4240	0.0160
0.0135	0.3919	0.0338	0.1081	0.4324	0.0203

	Unpaired t test of Brain Derived Mitochondrial Isolates vs. Lipofuscin Datasets					
	IMS	Matrix	Unknown	MOM	MIM	Membrane
P value	0.0014	0.0203	0.1485	0.4007	0.00004	0.0598
P value summary	**	*	ns	ns	***	ns
Significantly different (P < 0.05)?	Yes	Yes	No	No	Yes	No
One- or two-tailed P value?	Two-tailed					

Data Description: Fig. 3I - Overlap of mitochondrial proteins detected in consensus lipofuscin proteomes for each genotype (PPT1 KO: n = 250; WT: n = 296) and MitoCarta 3.0 (n = 1099) (61) with S-acylated brain proteome (7). Fig. 3J - Overlap of lysosomal proteins detected in consensus lipofuscin proteomes for each genotype (PPT1 KO: n = 205; WT: n = 249) and combined lysosomal annotation datasets (n = 2517) (62-64) with S-acylated brain proteome (7). Fig. 3K - Overlap of synaptic proteins detected in consensus lipofuscin proteomes for each genotype (PPT1 KO: n = 285; WT: n = 369) and brain-derived synaptosome fraction annotation dataset (n = 2921) (65) with S-acylated brain proteome (7). Fig. 3L - Overlap of synaptic vesicle proteins detected in consensus lipofuscin proteomes for each genotype (PPT1 KO: n = 401; WT: n = 509) and brain-derived purified synaptic vesicle annotation dataset (n = 1426) (65) with S-acylated brain proteome (7).

Fig. 3I Mitochondrial Proteins	S-Acylated	Residual	Total
MitoCarta 3.0	454	645	1099
WT-12-18-24	274	22	296
PPT1-2-4-7	238	12	250

Fig. 3J Lysosomal Proteins	S-Acylated	Residual	Total
Laqtom et al/Chapel et al/Akter et al	572	1945	2517
WT-12-18-24	249	6	255
PPT1-2-4-7	205	6	211

Fig. 3K Synaptosomal Proteins	S-Acylated	Residual	Total
Taoufiq et al 2020 Synaptosome	557	2359	2916
WT-12-18-24 Synaptosome	351	18	369
PPT1-2-4-7 Synaptosome	273	12	285

Fig. 3L Synaptic Vesicle Proteins	S-Acylated	Residual	Total
Taoufiq et al 2020 SV	598	828	1426
WT-12-18-24 SV	493	16	509
PPT1-2-4-7 SV	387	14	401

Data Description: Fig. 3M - Correlation of percent (%) abundance between WT 24-month and PPT1 KO 7-month lipofuscin proteomes (n=878 overlapping proteins). Fig. 3N - Fold-change comparison between WT 24-month and PPT1 KO 7-month lipofuscin proteomes (n=878 overlapping proteins). Top 10 significantly differentially expressed proteins are annotated.

Fig. 3M % Abundance Correlation		
UniProt ID	**WT-24**	**PPT1 KO-7**
1433B	0.10298666	0.08823976
1433E	0.26742415	0.16989727
1433F	0.06475005	0.05841475
1433G	0.1722113	0.176999
1433T	0.08276868	0.08094416
1433Z	0.45950667	0.40575284
2AAA	0.08562894	0.01755764
3HIDH	0.05002486	0.05289961
4F2	0.07995488	0.12812332
A0A0A6YW6	0.26257443	0.42492333
AAK1	0.03350628	0.01864119
AATC	0.14695549	0.03901304
AATM	1.44266625	1.10378608
ABCB7	0.01130523	0.00776679
ABCD3	0.00216132	0.00165459
ABHDA	0.00894381	0.00372542
ABLM1	0.00437547	0.00206034
ABLM2	0.00263702	0.00323933
ACAD8	0.01662751	0.01084883
ACAD9	0.04295299	0.01747263
ACADL	0.17186432	0.05140961
ACADM	0.03111705	0.01662313
ACADS	0.01016162	0.00466617
ACADV	0.033855	0.04204585
ACBG1	0.03154189	0.03421038

Fig. 3M - Simple Linear Regression	
Best-fit values	
Slope	1.035
Y-intercept	-0.008143
X-intercept	0.00787
1/slope	0.9665
Std. Error	
Slope	0.01176
Y-intercept	0.00377
95% Confidence Intervals	
Slope	1.012 to 1.058
Y-intercept	-0.01554 to -0.0007441
X-intercept	0.0007249 to 0.01491
Goodness of Fit	
R squared	0.8983
Sy.x	0.1044
Is slope significantly non-zero?	
F	7735
DFn, DFd	1, 876
P value	<0.0001
Deviation from zero?	Significant

ACDSB	0.0211362	0.0154136
ACLY	0.01625903	0.01220168
ACO13	0.05972057	0.05440989
ACON	3.37594578	3.04343905
ACOT2	0.00921118	0.00834001
ACOT9	0.01354349	0.00633494
ACPM	0.06130202	0.02069574
ACSF2	0.05593278	0.01399412
ACSF3	0.00310537	0.00186897
ACSL1	0.00281789	0.00462901
ACSL6	0.10082387	0.04284328
ACTG	0.07203633	0.03363094
ACTN1	0.02221052	0.02440561
ACTZ	0.01002488	0.00603289
ADA22	0.01810092	0.01307717
ADDA	0.07788623	0.06491833
ADDB	0.01700872	0.01559553
ADDG	0.00937945	0.0242232
ADRO	0.00312454	0.00236549
ADT1	1.17744573	2.14403651
ADT2	0.66479026	0.73221709
AFG32	0.03421093	0.01484793
AGK	0.02202714	0.00479463
AGRL1	0.00023172	0.0014102
AIFM1	0.04599135	0.03919013
AINX	0.20461234	0.31618204
AK1A1	0.01077105	0.00852797
AL1A1	0.00885176	0.0008676
AL1B1	0.00603961	0.00534793
AL1L1	0.02711745	0.00720148
AL3A2	0.00452638	0.00491482
AL4A1	0.02397345	0.00809758
AL7A1	0.05802244	0.01603352
AL9A1	0.01574662	0.00391689
ALDH2	0.2264085	0.16001355
ALDOA	0.51220731	0.55683764
ALDOC	0.27099347	0.18084897

Equation	Y = 1.035*X - 0.008143

Data	
Number of X values	2634
Maximum number of Y replicate	1
Total number of values	878

ALDR	0.00828311	0.00270352
AMPH	0.07720108	0.04516499
AMPL	0.01904953	0.01759851
ANK2	0.28722693	0.25549865
ANK3	0.04740385	0.01131497
ANXA5	0.02489224	0.01688811
ANXA6	0.02265133	0.00627726
AOFA	0.05360949	0.05961626
AOFB	0.05741496	0.06100878
AP180	0.09183489	0.05261175
AP1B1	0.02091244	0.01150752
AP2A1	0.08427209	0.03687837
AP2A2	0.08063244	0.06071127
AP2B1	0.09735498	0.05495727
AP2M1	0.10366385	0.03615201
AP3B2	0.00692621	0.0039921
AP3D1	0.00526212	0.0011835
APOE	0.00505042	0.00713907
AQP4	0.01409209	0.00907292
ARBK1	0.00147193	0.00030888
ARC1A	0.02304421	0.00928301
ARF3	0.04955602	0.02643182
ARF6	0.00354764	0.00491305
ARFG1	0.01233748	0.00187568
ARL8B	0.00950583	0.01351025
ARM10	0.00571859	0.00673512
ARP2	0.02360182	0.01716685
ARP3	0.04044577	0.02948242
ARP5L	0.0086267	0.0057397
ARPC2	0.02427859	0.0070786
ARPC3	0.00304021	0.00529674
ARPC4	0.02493936	0.0189318
ARPC5	0.00310457	0.00437906
ASAH1	0.00846658	0.12369366
ASGL1	0.01516068	0.00925287
AT1A1	0.42875831	0.59829218
AT1A2	0.79134094	1.15254075
AT1A3	1.61236685	1.94095536

AT1B1	0.72248135	0.93947852
AT1B2	0.45159495	0.70429555
AT1B3	0.01834314	0.04358815
AT2A2	0.09093276	0.0940449
AT2B1	0.22634655	0.06558597
AT2B2	0.27370963	0.2523802
AT2B4	0.00126417	0.03075462
AT5F1	0.41262998	0.3527753
AT8A1	0.03056876	0.02755469
ATAD3	0.02452747	0.00727602
ATIF1	0.02017595	0.07041435
ATLA1	0.00510047	0.00792738
ATP5E	0.08065578	0.05174871
ATP5H	0.51694448	0.67708118
ATP5I	0.13926163	0.16850475
ATP5J	0.24864028	0.30146696
ATP5S	0.0013325	0.00184008
ATP8	0.15241897	0.21232767
ATPA	0.15103279	0.21867512
ATPB	4.37150951	4.75572305
ATPD	0.2316809	0.45196757
ATPG	0.51648116	0.65489855
ATPK	0.12697005	0.22382225
ATPMK	0.11650937	0.20717998
ATPO	0.27274616	0.57425727
AUHM	0.06748994	0.06688501
AUXI	0.02325723	0.00853541
B2RXT3	0.23699499	0.1688294
B3AT	0.00046576	0.00405995
BACH	0.01876029	0.01147035
BAIP2	0.02669103	0.01564583
BASI	0.02786175	0.04027302
BASP1	0.61388028	0.40532678
BCAS1	0.03481441	0.03479331
BCS1	0.00924288	0.00375976
BDH	0.07766681	0.04036669
BIN1	0.05146982	0.01720414
BIP	0.03182508	0.04115037

BPHL	0.03197311	0.0028683
BPNT1	0.01945224	0.00459689
BSN	0.16955536	0.05222621
C1QBP	0.1570572	0.07882949
C1TC	0.0048177	0.00240284
C1TM	0.01893137	0.00532892
CA2D1	0.02467059	0.03289216
CACP	0.01026995	0.00371653
CAD13	0.0043381	0.00657849
CADH2	0.00935296	0.00740919
CADM1	0.02557099	0.03522085
CADM2	0.04028706	0.01996616
CADM3	0.02151316	0.02113818
CADM4	0.01027113	0.01223336
CAH2	0.06768415	0.00486443
CALB2	0.01880537	0.00843012
CALM1	0.50477551	0.46133305
CALR	0.04326675	0.0224446
CALX	0.04386234	0.02860119
CAMKV	0.04295556	0.01340562
CAN2	0.00309734	0.00066268
CANB1	0.04755296	0.03286845
CAND1	0.0210552	0.00677177
CAP1	0.03192639	0.01179268
CAPS1	0.05060772	0.01031706
CAPZB	0.03043817	0.02342245
CATB	0.00852669	0.00461689
CATD	0.01740484	0.42516369
CAZA2	0.03901744	0.03759204
CBPE	0.00847257	0.00784677
CBR1	0.01916929	0.00750763
CBR4	0.00604698	0.00770529
CC50A	0.00417173	0.00529724
CCG8	0.0125699	0.00831271
CD166	0.00813963	0.01071356
CD47	0.04559128	0.0475632
CD81	0.07388713	0.01926158
CDC42	0.03033075	0.00417694

CDS2	0.01037334	0.00811482
CEND	0.14528408	0.19476449
CH10	0.35021335	0.24481149
CH60	0.71312618	0.54222663
CHCH2	0.00835696	0.00150548
CISD1	0.14131722	0.13743229
CISY	0.4764836	0.32916161
CLAP2	0.00216737	0.00216074
CLCB	0.03746738	0.03219909
CLD11	0.09349817	0.17832914
CLH1	0.98847827	0.68436591
CLIC4	0.00658316	0.00943143
CLUS	0.00366446	0.02029967
CLYBL	0.00875146	0.00431761
CMPK2	0.03204993	0.0042689
CN37	0.69767801	0.74463586
CNTFR	0.00419631	0.00251526
CNTN1	0.15743878	0.12441104
CNTP1	0.0301816	0.01312401
CNTP2	0.00779039	0.00232809
COF1	0.11968701	0.13158732
COF2	0.00469403	0.00296752
COQ3	0.003457	0.00196987
COR1A	0.02194076	0.0051298
COX2	0.40906631	0.38325211
COX3	0.08119125	0.02462852
COX41	0.55488118	0.50782702
COX5A	0.52609672	0.5015215
COX6C	0.1720682	0.22626971
CPLX2	0.04001881	0.04285421
CPNE6	0.00618097	0.00405132
CPT1A	0.00509079	0.00063247
CPT2	0.00982686	0.00357913
CRYAB	0.00263949	0.00492443
CSK21	0.00427302	0.00485317
CSKI1	0.0118926	0.0025799
CSKP	0.00833235	0.00477492
CSPG2	0.02001068	0.01388109

CSPG5	0.01035127	0.01135331
CSRP1	0.04834364	0.10049826
CTBP1	0.03193353	0.0098404
CTNA2	0.03697458	0.01577936
CTNB1	0.02956166	0.04519067
CTND2	0.01518749	0.01879714
CX6B1	0.58467541	0.73271656
CX7A2	0.17839674	0.08848058
CXA1	0.03220573	0.0207361
CY1	0.29164348	0.29732428
CYC	0.32448613	0.18201351
CYFP2	0.02781544	0.01851061
CYRIB	0.01028418	0.0084347
D39U1	0.00643756	0.00348381
DC1L1	0.00676107	0.00248154
DCE1	0.01694148	0.02022909
DCLK1	0.00441623	0.0037924
DCTN2	0.01129626	0.0107132
DDAH1	0.03282985	0.01999388
DECR	0.02526124	0.03888443
DEST	0.02511885	0.01575844
DHB4	0.006945	0.00647053
DHB8	0.00953349	0.0152332
DHE3	1.60932374	1.55464109
DHPR	0.01100166	0.01242107
DHRS1	0.01583687	0.11590176
DHRS4	0.00589096	0.00472119
DJC11	0.01835753	0.01355911
DLDH	0.32996468	0.21102005
DLG1	0.00746914	0.00518508
DLG2	0.0402322	0.01497341
DLG4	0.11763535	0.05991124
DLGP1	0.00279464	0.00087104
DLGP2	0.00167664	0.00187775
DLGP4	0.00289221	0.00102741
DLRB1	0.0049321	0.00445308
DMXL2	0.04467831	0.02959574
DNJA2	0.00807447	0.00560134

DNJA3	0.00877986	0.00300968
DNJC5	0.11609771	0.11325475
DNM1L	0.03256139	0.00576682
DPP10	0.00719389	0.00192993
DPP6	0.00987705	0.00536168
DPYL1	0.16578259	0.04240591
DPYL2	0.89851824	0.57784685
DPYL4	0.0117108	0.00368146
DPYL5	0.01186528	0.00307948
DYHC1	0.1073843	0.06842429
DYL1	0.00751986	0.04811191
DYN1	0.50131071	0.12354018
DYN3	0.01806752	0.00402482
E41L1	0.02406421	0.00488845
E41L2	0.04195404	0.02014733
EAA1	0.21058081	0.22314407
EAA2	1.44811272	1.79759806
ECH1	0.00361836	0.00733409
ECHA	0.22727003	0.25484201
ECHB	0.10004955	0.12570777
ECHM	0.10373468	0.17354089
ECI1	0.05298762	0.02513815
EF1A1	0.02841208	0.03237774
EF1A2	0.01757032	0.00135447
EF1D	0.00221196	0.0031533
EF2	0.02435333	0.01466211
EFGM	0.00721843	0.00225556
EFHD2	0.02565125	0.01045534
EFTU	0.23255787	0.24989198
EHD3	0.00729723	0.00512118
ENDD1	0.00521252	0.00791638
ENOA	0.42434397	0.21389414
ENOG	0.1427063	0.07175507
ENPL	0.01781949	0.01396166
ENTP2	0.00091128	0.00252682
EP15R	0.00135502	0.00045311
ERC2	0.00893108	0.01132065
ETFA	0.15581362	0.07808469

ETFB	0.04026713	0.09290505
ETFD	0.06712908	0.06707756
ETHE1	0.00932261	0.00938266
EXOG	0.01748331	0.00671073
EZRI	0.00415675	0.00397425
F136A	0.01023035	0.00609186
F162A	0.02695772	0.01869283
FABP5	0.01192468	0.00399072
FABPH	0.00615782	0.004545
FAHD2	0.0398332	0.02751333
FARP1	0.00551641	0.00506654
FAS	0.01951487	0.01141311
FERM2	0.00211856	0.00255038
FIS1	0.02113824	0.01196683
FLOT1	0.00961685	0.00937834
FLOT2	0.01132857	0.00967232
FSCN1	0.02718115	0.00899908
FUMH	0.29223382	0.1218043
FUND2	0.00341146	0.01566425
G3P	1.26201818	0.90472165
G6PI	0.1844886	0.0407159
GABR1	0.00260319	0.00322473
GABR2	0.00246921	0.00213651
GABT	1.06297657	0.42851808
GAL3A	0.18327597	0.1300212
GANAB	0.002087	0.00105317
GBB1	0.23754189	0.30008793
GBB2	0.41880474	0.1555224
GBB4	0.0015649	0.00202766
GBG12	0.01926423	0.05431637
GBG2	0.01450391	0.12397296
GBG7	0.01596735	0.02734882
GBRA1	0.0109268	0.01085924
GCDH	0.00619667	0.00384474
GD1L1	0.02178609	0.00860742
GDAP1	0.03740435	0.04773911
GDIA	0.10826911	0.05616219
GDIB	0.08281059	0.00144267

GDIR1	0.05602793	0.01238144
GDS1	0.00978114	0.00412327
GEPH	0.02948782	0.00708198
GFAP	0.0627371	0.3686126
GHC1	0.14713467	0.14915459
GHC2	0.02662364	0.03102054
GLNA	0.45945976	0.46589205
GLOD4	0.00839183	0.00221463
GLPK	0.05203019	0.05459525
GLRX5	0.00763492	0.01230937
GLSK	0.19724502	0.0835649
GLU2B	0.00127524	0.00621845
GNA11	0.00735163	0.00183137
GNA13	0.00812529	0.00901793
GNAI1	0.02963927	0.01306469
GNAI2	0.03479938	0.02120477
GNAO	0.55753751	0.63811687
GNAQ	0.02509059	0.03449837
GNAS2	0.01336795	0.00691463
GNAZ	0.01662793	0.01524763
GNB5	0.01624255	0.00630016
GPDA	0.01245031	0.00485578
GPDM	0.34904932	0.41956275
GPM6A	0.28394325	0.31289644
GPM6B	0.06758287	0.06328879
GPX4	0.01549706	0.00991447
GRIN1	0.00996329	0.0058424
GRP75	0.40996985	0.41856131
GRPE1	0.01254235	0.00593503
GSTM1	0.04129929	0.06444208
GSTP1	0.03971525	0.02728534
GTR3	0.01240463	0.00868227
GUAD	0.02930279	0.01083496
H14	0.00225125	0.01209593
H2B1C	0.01466531	0.01753952
H4	0.01080527	0.02547016
HACD3	0.00405867	0.00627108
HBA	0.08714304	0.18394672

HCD2	0.07115051	0.04032007
HCDH	0.03185204	0.02338856
HECAM	0.01389372	0.02299635
HEMH	0.02086547	0.01005011
HIBCH	0.03288301	0.01657288
HINT2	0.02619905	0.01887978
HINT3	0.00069589	0.00161968
HMGCL	0.00695192	0.00715527
HNRPK	0.00225325	0.00139003
HOME1	0.01522329	0.01110081
HPCA	0.00474262	0.01384126
HPLN4	0.00081889	0.00049571
HS105	0.01038314	0.00561652
HS12A	0.04790124	0.02112846
HS74L	0.01509311	0.00321842
HS90A	0.10216719	0.0491628
HS90B	0.06985777	0.02258442
HSDL1	0.00455146	0.00185226
HSDL2	0.00721104	0.00535237
HSP74	0.03206587	0.00733763
HSP7C	0.30778863	0.44228995
HTRA2	0.00246954	0.00465978
HXK1	0.98459521	0.97685309
I3ITR1	0.00373473	0.00288359
I5P1	0.00195608	0.00209229
ICAM5	0.01045367	0.00581896
IDH3A	0.71510931	0.6336397
IDHG1	0.21670366	0.13026409
IDHP	0.10952269	0.05479994
IF5A1	0.00897819	0.00139587
IGSF8	0.06582908	0.02185651
IMPA1	0.0101333	0.00454513
IPYR2	0.03083206	0.00638794
IQEC1	0.01243159	0.01322657
IQEC2	0.00284683	0.00078807
ISC2A	0.04313341	0.01320773
ISCA2	0.0075449	0.00160009
ITPR1	0.02225347	0.01064732

IVD	0.04981726	0.0468105
KAD1	0.0221304	0.00398998
KAD3	0.07465028	0.03022284
KAD4	0.03740315	0.01517752
KAP2	0.00537048	0.00526406
KAP3	0.01777831	0.00428582
KCC2A	0.3644406	0.37438367
KCC2B	0.13013022	0.07142451
KCC2G	0.22127468	0.01517045
KCNA2	0.00774353	0.00321353
KCNC3	0.00235852	0.0020412
KCRB	0.79064665	0.50269725
KCRU	0.75803575	0.39216901
KGD4	0.02210916	0.01121684
KIF2A	0.00749267	0.00708413
KINH	0.00211508	0.00910032
KPCG	0.04068387	0.00808582
KPYM	0.68211453	0.39611716
L1CAM	0.01862092	0.01295708
L2HDH	0.0047118	0.0032407
LACTB	0.00748754	0.0090882
LAMP1	0.00971476	0.02173849
LANC1	0.0063219	0.00258208
LANC2	0.01048644	0.00519628
LASP1	0.01626999	0.00788833
LAT1	0.00607539	0.01040802
LDHA	0.07498867	0.03316158
LDHB	0.17578786	0.06660015
LETM1	0.11971251	0.1379325
LGI1	0.02215805	0.01834533
LGI3	0.00164943	0.00389591
LIGO1	0.0057199	0.00441978
LIS1	0.01485893	0.00828546
LONM	0.05209939	0.02309126
LPPRC	0.05067682	0.0314843
LRP1	0.00182305	0.00103852
LSAMP	0.05322167	0.06038116
LY6H	0.02905133	0.01605617

M2OM	0.28126908	0.21081254
MAAI	0.00770102	0.00387129
MACD1	0.01345649	0.01045508
MACF1	0.00658858	0.0025155
MAG	0.03358753	0.03113228
MAL2	0.01529282	0.01807957
MAOM	0.02014753	0.00725491
MAON	0.03012665	0.01244746
MAP1A	0.07210325	0.03918869
MAP1B	0.06717512	0.09313218
MAP4	0.01392197	0.00565094
MAP6	0.11494546	0.08832051
MARC2	0.0305065	0.03938015
MARCS	0.16428304	0.08742301
MARE3	0.01995335	0.01127377
MBP	1.55847118	2.66123402
MCCA	0.02464223	0.01297789
MCCB	0.01830174	0.01606246
MCU	0.02291457	0.01270062
MDHC	0.24632782	0.10204904
MDHM	3.15606922	3.07554839
MECR	0.00843271	0.01046598
MFN2	0.010982	0.00505733
MIC10	0.02815853	0.05574535
MIC19	0.08920104	0.12040051
MIC25	0.04012418	0.02995467
MIC26	0.04509043	0.05342247
MIC27	0.01122303	0.0101544
MIC60	0.44714914	0.55396208
MICU3	0.00587572	0.0017767
MIRO1	0.01694087	0.01447756
MITOK	0.00207093	0.0016212
MITOS	0.00589514	0.00742128
ML12B	0.00414086	0.01260395
MMAB	0.00266577	0.00090609
MMSA	0.23959044	0.12541196
MOES	0.00061457	0.00410444
MOG	0.06508912	0.08846287

MOT1	0.00503176	0.00164385
MP2K1	0.00920777	0.00689403
MPC1	0.05383597	0.00480169
MPC2	0.0539945	0.02094364
MPP2	0.0142904	0.00745614
MTAP2	0.0289323	0.02532563
MTCH1	0.03429606	0.03778037
MTCH2	0.15111926	0.10740168
MTX1	0.01514565	0.00809672
MTX2	0.03995327	0.02142669
MUTA	0.01585474	0.00192746
MY18A	0.00279771	0.00824923
MYH10	0.02603085	0.01300543
MYL6	0.00812368	0.03366998
MYO1D	0.00011181	0.00044935
MYO5A	0.13087547	0.05701004
MYO6	0.0031308	0.00462171
MYPR	1.11954226	2.16236681
NAC2	0.03410053	0.02516634
NAKD2	0.01696309	0.01013126
NB5R1	0.01251139	0.0091564
NB5R3	0.02158213	0.0371941
NCAM1	0.27005639	0.30816465
NCAM2	0.0134144	0.01203659
NCAN	0.00150601	0.00756125
NCDN	0.04133619	0.01686969
NCKP1	0.02107721	0.00484323
NDKA	0.01216021	0.02188607
NDRG2	0.0436254	0.02324955
NDUA2	0.09387619	0.16241047
NDUA4	0.54819978	0.48113315
NDUA5	0.04579099	0.10525203
NDUA6	0.04092888	0.09669949
NDUA7	0.07249312	0.05004109
NDUA8	0.07754986	0.04552354
NDUA9	0.1521038	0.06038672
NDUAA	0.25685451	0.20691372
NDUAB	0.03879604	0.05109084

NDUAC	0.11520775	0.08008531
NDUAD	0.11203101	0.12710275
NDUB4	0.06176612	0.0865597
NDUB5	0.08477069	0.04561736
NDUB6	0.08382412	0.01519196
NDUB7	0.03475744	0.06655532
NDUB8	0.06329485	0.03312345
NDUB9	0.12247945	0.13305678
NDUBA	0.12312177	0.17213041
NDUC2	0.09518382	0.10402784
NDUS1	0.63050859	0.67605034
NDUS2	0.17821227	0.08642696
NDUS3	0.17079116	0.17352505
NDUS4	0.12932145	0.179613
NDUS5	0.05484729	0.06212007
NDUS6	0.11578665	0.12767582
NDUS7	0.09965422	0.0363545
NDUS8	0.04725213	0.03408455
NDUV1	0.30679497	0.31644912
NDUV2	0.17380648	0.23799495
NDUV3	0.05346855	0.04296757
NECP1	0.01494005	0.00890558
NEGR1	0.01130043	0.01422875
NEUM	0.18473619	0.19141487
NF1	0.00028761	0.00037849
NFASC	0.13179318	0.16775896
NFH	0.05658626	0.07487726
NFL	0.17726416	0.21386777
NFM	0.17258486	0.198527
NFS1	0.01367127	0.00778765
NIPS1	0.09168316	0.0538004
NIPS2	0.08408117	0.06211033
NLGN2	0.00266533	0.00525246
NMDE2	0.0035206	0.00702821
NMDZ1	0.02035494	0.01893223
NNRD	0.02522802	0.01402915
NOE1	0.0049438	0.0035517
NPTN	0.11498848	0.10660174

NPTX1	0.00261203	0.00361913
NPTXR	0.00503987	0.01728418
NRX1A	0.01374272	0.00450897
NSF	0.41520967	0.41584601
NT5D3	0.0198835	0.00767444
NTRI	0.02382115	0.02568127
NU5M	0.03703591	0.02451848
OAT	0.04379956	0.01325342
OCAD1	0.01338172	0.01396998
OCAD2	0.01970506	0.01977571
ODB2	0.01728957	0.02804664
ODO1	0.35583736	0.24768474
ODO2	0.22993042	0.21517476
ODP2	0.38863096	0.48627749
ODPA	0.60584094	0.47706135
ODPB	0.45075432	0.43361046
ODPX	0.06945924	0.06203709
OMGP	0.03692231	0.03255347
OPA1	0.15179999	0.12801344
OTUB1	0.01906668	0.00531952
OXR1	0.02284133	0.00987274
P5CR2	0.00994154	0.00887129
P5CS	0.00312015	0.0021985
PACN1	0.09595798	0.03292322
PALM	0.07116115	0.06004614
PALS2	0.0072539	0.01287038
PCCA	0.05644878	0.02034265
PCCB	0.04359716	0.04418251
PCKGM	0.01230121	0.00586798
PCLO	0.0640329	0.01161885
PCS1N	0.05208429	0.03763924
PDIA1	0.00466979	0.00300678
PDIA3	0.03496125	0.04839292
PDK1	0.00281747	0.00419028
PEA15	0.01187518	0.0067082
PEBP1	0.18541886	0.08938576
PFKAL	0.01289091	0.00850374
PFKAM	0.10070182	0.04420023

PFKAP	0.03356208	0.01496319
PGAM1	0.15741572	0.05968156
PGK1	0.17237551	0.06347846
PGM1	0.01793843	0.00143004
PHB1	0.14384825	0.18022131
PHB2	0.1660628	0.12389528
PHF24	0.01596227	0.01110092
PHYIP	0.00650889	0.00188433
PI4KA	0.00747987	0.00485393
PIMT	0.01563359	0.01009756
PLCB1	0.01668533	0.01023643
PLEC	0.09318296	0.08821484
PLPP3	0.01614247	0.03825576
PLPR4	0.00109766	0.00177567
PP1A	0.00159673	0.00159407
PP2BA	0.07261103	0.01564053
PPIA	0.30759896	0.13972171
PPIB	0.00284267	0.00334619
PPID	0.00686934	0.00158677
PRDX1	0.06779213	0.06680269
PRDX2	0.05283703	0.06369882
PRDX3	0.12567135	0.07324757
PRDX5	0.3642029	0.37193155
PRDX6	0.04119112	0.04412401
PROD	0.01374957	0.01349232
PROF1	0.02274076	0.0132379
PROF2	0.02793255	0.03414555
PRRT2	0.07704395	0.01980085
PSA	0.02456441	0.00440298
PSA5	0.0021179	0.0036156
PSB5	0.00292172	0.00237568
PTGR3	0.01191304	0.00232632
PTPR2	0.00154948	0.00134902
PTPRA	0.00186005	0.00170049
PTPRZ	0.00908668	0.00156511
PURA	0.01740323	0.00599125
PXL2A	0.01772038	0.02143419
PXL2B	0.00407628	0.0006826

PYC	0.25862029	0.13591017
PYGB	0.06791386	0.03653488
PYGM	0.01715597	0.00306321
Q91VA7	0.39848003	0.28605993
QCR1	0.80269549	1.02362692
QCR10	0.00883059	0.00596358
QCR2	1.02596859	1.13932346
QCR7	0.14900498	0.07434373
QCR8	0.13283827	0.07346275
QCR9	0.10131154	0.13167633
QORL2	0.00738378	0.01108856
RAB10	0.02578191	0.02885863
RAB14	0.03214506	0.03626267
RAB18	0.01283445	0.00947372
RAB21	0.00730408	0.00776353
RAB2A	0.0443279	0.03650619
RAB35	0.01572447	0.00722162
RAB3A	0.12885312	0.12824453
RAB3C	0.01983066	0.01697182
RAB5C	0.00939143	0.00791154
RAB7A	0.03825449	0.04656335
RAB8B	0.00378431	0.00187848
RALA	0.01363207	0.01207831
RASH	0.00554909	0.02002265
RB11B	0.02869065	0.02021896
RDH13	0.0012168	0.00395582
RDH14	0.00232924	0.0013372
REEP5	0.01579473	0.02518938
RHOA	0.0194583	0.01839245
RHOB	0.01279237	0.02409931
RHOG	0.00570786	0.00902502
RIDA	0.01233357	0.02103302
RL11	0.00314066	0.00594677
RL12	0.00665956	0.00812236
RL13	0.00409318	0.00599529
RL14	0.00142184	0.00332383
RL15	0.00125712	0.00282076
RL18	0.00520495	0.01068345

RL27	0.00170569	0.00257905
RL28	0.00195708	0.00517824
RL3	0.00367146	0.00484856
RL30	0.00145264	0.0045661
RL4	0.00429021	0.00737374
RL6	0.00237849	0.00330997
RL7	0.0023411	0.00248687
RL8	0.00342713	0.00605837
RLA2	0.00826216	0.01641603
RM12	0.01154186	0.00984035
RMND1	0.00164146	0.00248375
ROCK2	0.00176322	0.00183417
RP3A	0.05000648	0.01597966
RPGF4	0.00768271	0.00306028
RPN1	0.02312915	0.00595349
RS2	0.00326508	0.00096576
RS6	0.00193312	0.00309835
RS8	0.00480804	0.00390789
RT07	0.00125239	0.00173427
RT22	0.00245025	0.00129741
RT23	0.00202705	0.00087655
RTN1	0.10610558	0.0789747
RTN4	0.05670024	0.0209729
S10A1	0.00477301	0.0039444
S12A2	0.00307766	0.00407183
S12A5	0.12063863	0.09605984
S2512	0.64554037	0.79748697
S2540	0.00040373	0.00074143
S2546	0.01453813	0.00111277
S2551	0.00320418	0.00204697
S27A4	0.00161712	0.00172355
S38A3	0.00658641	0.00622103
S39AC	0.00022407	0.00411414
S4A10	0.00778905	0.00546124
S4A4	0.09451799	0.06018741
S6A11	0.1980671	0.18914241
SAHH2	0.02910769	0.00479343
SAHH3	0.00553392	0.01003502

SAM50	0.08337214	0.0768696
SAP	0.10881324	0.91946036
SATT	0.01706703	0.01115831
SC6A1	0.03390923	0.0302231
SCAI	0.00774912	0.00366779
SCAM1	0.01767165	0.02678202
SCAM5	0.01911728	0.01553898
SCMC2	0.01921736	0.01612849
SCMC3	0.02221766	0.00624166
SCN2A	0.00776195	0.01203118
SCOT1	0.207707	0.11628475
SCP2	0.00658195	0.00424625
SCPDL	0.01249037	0.0106234
SCRB2	0.00414407	0.03144738
SCRN1	0.0148827	0.00405056
SDHA	0.52767917	0.61562191
SDHB	0.13065662	0.11841743
SEPT11	0.04999547	0.07741635
SEPT2	0.00276505	0.00985504
SEPT3	0.06771617	0.04330406
SEPT5	0.16762586	0.1532846
SEPT7	0.19571155	0.13701099
SEPT8	0.03546793	0.0394626
SEPT9	0.01405247	0.00583862
SERA	0.02220265	0.01393639
SERC	0.00921355	0.00655427
SFXN1	0.04975381	0.06132122
SFXN3	0.19126996	0.2363526
SFXN5	0.1657105	0.20741089
SH3G1	0.00170509	0.03378328
SHAN1	0.01226818	0.0031029
SHAN2	0.00806711	0.0015411
SHAN3	0.01100614	0.00138227
SHLB2	0.01594574	0.00440512
SHPS1	0.06448754	0.05586763
SHSA7	0.00216525	0.00100917
SIR2	0.04836435	0.07983023
SKP1	0.00796523	0.00481223

SNAA	0.01881441	0.00872578
SNAB	0.0714978	0.05898592
SNAG	0.02654553	0.02593518
SNG1	0.05081495	0.07994054
SNG3	0.07011151	0.1119294
SNP25	0.20752095	0.12933964
SNP47	0.00380826	0.0026268
SNPH	0.01604721	0.00531501
SNX1	0.0018281	0.002762
SODC	0.07988166	0.01784856
SODM	0.30285618	0.1144658
SOGA3	0.00414556	0.00259807
SPG7	0.00192996	0.00066108
SPRE	0.00550416	0.00061533
SPRY4	0.00070429	0.00062682
SPTB1	0.78800076	0.00458257
SPTB2	0.11879541	0.8557055
SPTN1	1.3362878	1.63701126
SQOR	0.00310281	0.00401028
SRC	0.00130099	0.00156502
SRC8	0.00910234	0.00434711
SRCN1	0.05069609	0.04905641
SSDH	0.35462959	0.31163834
STAM1	0.00052207	0.00282036
STB5L	0.00236322	0.00381514
STML2	0.01253238	0.02498179
STMN1	0.00994553	0.01425175
STX12	0.00730878	0.00558936
STX1A	0.07186269	0.07477505
STX1B	0.28612173	0.29414284
STX7	0.00198774	0.00835621
STXB1	0.86429868	0.64378772
SUCA	0.26664438	0.22959357
SUCB1	0.3969671	0.37581783
SUCB2	0.04031826	0.03187915
SV2A	0.20195398	0.11715978
SV2B	0.08748302	0.03804199
SYGP1	0.10195744	0.02647261

SYIM	0.07408137	0.01016495
SYN1	0.96877868	0.58074189
SYN2	0.41517941	0.15393266
SYN3	0.00096685	0.00189625
SYNJ1	0.06945405	0.03403916
SYNPO	0.01681939	0.0032681
SYPH	0.17553288	0.20798293
SYT1	0.19855045	0.18097855
SYT2	0.04072586	0.01426233
SYUA	0.06531111	0.07745075
SYUB	0.04158011	0.02618394
TAGL3	0.06834483	0.05357196
TAU	0.11582263	0.09387772
TBA4A	0.09725953	0.11974802
TBB3	0.09118069	0.0417964
TBB4A	0.06251472	0.09163995
TBB5	0.07237081	0.23371028
TCPA	0.01169524	0.01093737
TCPB	0.0187956	0.0046386
TCPD	0.0126193	0.00556934
TCPE	0.01515065	0.00343541
TCPG	0.02179328	0.00453673
TCPH	0.0134193	0.006022
TCPQ	0.01826395	0.00749982
TCPZ	0.01242365	0.00641314
TDRKH	0.00322004	0.00457361
TENR	0.0396612	0.00932383
TERA	0.05924011	0.01626921
THEM4	0.01802258	0.01813369
THIKA	0.00520605	0.00507233
THIL	0.3366306	0.31425292
THIM	0.0889808	0.04087792
THIO	0.01152223	0.01039374
THTM	0.00723664	0.00313621
THTR	0.09702604	0.09977463
THY1	0.28474137	0.39779821
TIM10	0.01118419	0.02142698
TIM13	0.0195523	0.01910885

TIM22	0.0037447	0.00706302
TIM44	0.01456152	0.01164155
TIM50	0.0137527	0.0126893
TIM9	0.03192307	0.03558465
TKT	0.05739175	0.03415011
TLN2	0.00692683	0.00098721
TM186	0.00046114	0.00140506
TMM65	0.02810186	0.00916241
TMOD2	0.01285448	0.00280883
TMX2	0.00118772	0.00396588
TOM22	0.01547574	0.02334175
TOM70	0.13023143	0.10111592
TPD54	0.00123214	0.00155478
TPIS	0.28852106	0.16168905
TPM1	0.01164187	0.01185056
TPP1	0.00343584	0.19436405
TPPP	0.08418108	0.04023815
TPPP3	0.00540877	0.00836451
TRAP1	0.01727569	0.01094231
TRFE	0.00060114	0.00085024
TSN2	0.0064211	0.01279112
TWF1	0.00116083	0.00234777
TXTP	0.02218167	0.02406094
UBA1	0.04497554	0.03111126
UBE2N	0.01687672	0.00167931
UBP5	0.01039998	0.00323902
UCHL1	0.11729128	0.04530291
UCRI	0.39689827	0.29180255
VA0D1	0.19951335	0.12491793
VAC14	0.00089754	0.00136547
VAMP1	0.0098596	0.00937625
VAMP2	0.17899025	0.18084012
VAPB	0.01206963	0.02035989
VAT1	0.00337199	0.00540998
VATA	0.22794901	0.19274492
VATB2	0.27915157	0.21658834
VATC1	0.0540533	0.05297236
VATD	0.01641489	0.00393719

VATE1	0.08127857	0.07919792
VATF	0.01375937	0.01791976
VATG1	0.00722273	0.00475864
VATG2	0.02465887	0.0120547
VATH	0.04798948	0.05349517
VDAC1	2.04384748	2.51016138
VDAC2	0.66785708	0.83949464
VDAC3	0.3882514	0.44103637
VGF	0.00179746	0.00603478
VIAAT	0.04866263	0.03825778
VIME	0.02931389	0.07430248
VISL1	0.06779071	0.01729659
VPP1	0.23457688	0.25921983
VPS35	0.02304281	0.00894411
VWA8	0.0069786	0.00344825
WDR1	0.03842477	0.00753347
WDR37	0.00252051	0.00086384
WDR7	0.01925051	0.0101233

Fig. 3N PPT1 KO-7 vs. WT-24 Lipofuscin Protein Abundance				
UniProt ID	log_{10}(PPT1-7/WT-24)	-log_{10}(p-value)	Top 10 PPT1 KO Hits	Top 10 WT Hits
1433B	-0.0671167	0.41407232		
1433E	-0.1970142	1.95961084		
1433F	-0.0447176	0.37306206		
1433G	0.01190917	0.056605		
1433T	-0.0096806	0.11048568		
1433Z	-0.0540303	0.32698113		
2AAA	-0.6881543	4.30998006		
3HIDH	0.02426658	0.06857007		
4F2	0.20478321	1.57947424		
A0A0A6YW6	0.20905814	3.13494727		
AAK1	-0.2546526	4.9301696		
AATC	-0.575976	2.76816514		
AATM	-0.116281	0.62745292		
ABCB7	-0.1630379	1.86767181		
ABCD3	-0.1160288	1.03779255		
ABHDA	-0.3803469	2.47994464		
ABLM1	-0.3270846	3.40324354		
ABLM2	0.08934114	0.42108517		
ACAD8	-0.1854445	0.9014099		
ACAD9	-0.3906352	2.41635053		
ACADL	-0.5241414	2.8998865		
ACADM	-0.2722855	1.25651232		
ACADS	-0.3380022	1.4587225		
ACADV	0.09410024	0.37791632		
ACBG1	0.03527021	0.10285669		
ACDSB	-0.1371227	0.85720586		
ACLY	-0.1246751	1.28344221		
ACO13	-0.0404461	0.11627138		
ACON	-0.0450309	0.20271691		
ACOT2	-0.0431487	0.10697561		
ACOT9	-0.3299883	1.87661417		
ACPM	-0.4715938	2.91843566		
ACSF2	-0.6017209	2.70099266		
ACSF3	-0.2205105	0.71910251		
ACSL1	0.21556373	2.17798368		
ACSL6	-0.3716806	5.48171563		
ACTG	-0.3308126	1.76785353		
ACTN1	0.04093093	1.06788598		

ACTZ	-0.2205538	3.51963137		
ADA22	-0.141187	1.91587123		
ADDA	-0.0790933	1.05744336		
ADDB	-0.0376716	0.20864981		
ADDG	0.41205426	2.27437612		
ADRO	-0.1208645	0.71918266		
ADT1	0.26029127	4.40845298		
ADT2	0.04195521	0.90853357		
AFG32	-0.362499	3.6692812		
AGK	-0.6622035	4.19785455		
AGRL1	0.78431824	2.54619233		
AIFM1	-0.0694995	1.00680503		
AINX	0.18900538	1.27605975		
AK1A1	-0.1014125	0.35192456		
AL1A1	-1.0087111	4.52334087		4.52334087
AL1B1	-0.0528232	0.26020562		
AL1L1	-0.5758272	3.4252		
AL3A2	0.03575653	0.44801789		
AL4A1	-0.4713753	2.16683643		
AL7A1	-0.5585671	2.93589699		
AL9A1	-0.6042456	3.17554469		
ALDH2	-0.150736	0.792624		
ALDOA	0.03628281	0.6558264		
ALDOC	-0.1756428	2.03248319		
ALDR	-0.4862635	2.41162064		
AMPH	-0.2328215	3.44864044		
AMPL	-0.0344083	0.16127588		
ANK2	-0.0508365	0.56980197		
ANK3	-0.6221603	4.85394583		
ANXA5	-0.1684829	1.62524707		
ANXA6	-0.5573239	3.12050274		
AOFA	0.04612307	0.84569566		
AOFB	0.02636732	0.23742531		
AP180	-0.241925	2.6765233		
AP1B1	-0.2594231	2.57068107		
AP2A1	-0.358912	2.91299354		
AP2A2	-0.1232404	2.55968959		
AP2B1	-0.248333	2.67752777		
AP2M1	-0.4574949	3.71931417		
AP3B2	-0.2392949	4.95904424		
AP3D1	-0.6479939	5.59254391		
APOE	0.15031378	0.44929574		
AQP4	-0.1912286	2.41169737		
ARBK1	-0.6781018	2.92798302		
ARC1A	-0.3948729	3.40169344		
ARF3	-0.2729693	2.67323716		
ARF6	0.1414114	0.79071961		
ARFG1	-0.8180687	4.70025319		
ARL8B	0.15267315	2.34674582		
ARM10	0.07105653	0.56245796		
ARP2	-0.1382549	3.33921389		
ARP3	-0.1373101	1.57456401		

ARP5L	-0.1769557	1.33225035		
ARPC2	-0.5352763	4.18776782		
ARPC3	0.24110533	2.04077941		
ARPC4	-0.1196933	1.8020765		
ARPC5	0.14937924	1.9862684		
ASAH1	1.16463962	5.5146173	5.5146173	
ASGL1	-0.2144424	1.87990903		
AT1A1	0.14470077	1.10633984		
AT1A2	0.16329266	1.02961246		
AT1A3	0.08055169	0.44570393		
AT1B1	0.11406022	1.13726293		
AT1B2	0.19300587	0.97048319		
AT1B3	0.37589481	1.20995863		
AT2A2	0.01461489	0.07122004		
AT2B1	-0.5379629	3.53938792		
AT2B2	-0.0352348	0.3474588		
AT2B4	1.38610414	3.36222755	3.36222755	
AT5F1	-0.0680626	0.77665302		
AT8A1	-0.0450823	1.4592761		
ATAD3	-0.527759	5.0356408		
ATIF1	0.54282709	3.93602523		
ATLA1	0.19151974	0.81582279		
ATP5E	-0.1927359	2.11794966		
ATP5H	0.11719684	1.79921373		
ATP5I	0.08278067	0.23221209		
ATP5J	0.08366822	1.14509507		
ATP5S	0.14016958	0.68609077		
ATP8	0.14396758	2.21344755		
ATPA	0.16072813	2.65062809		
ATPB	0.03658513	1.81282719		
ATPD	0.29021704	3.15069879		
ATPG	0.10311954	4.42854055		
ATPK	0.24620198	4.2759234		
ATPMK	0.24998694	2.38196562		
ATPO	0.32334786	3.54142982		
AUHM	-0.0039102	0.0170919		
AUXI	-0.4353335	3.12811383		
B2RXT3	-0.1472911	0.87411661		
B3AT	0.94036188	0.68159632		
BACH	-0.2136629	2.79606493		
BAIP2	-0.2319669	2.69324522		
BASI	0.16000579	1.54668796		
BASP1	-0.1802784	1.56435532		
BCAS1	-0.0002633	0.00056891		
BCS1	-0.3906473	3.87732939		
BDH	-0.2842124	3.07761606		
BIN1	-0.4759197	4.24083424		
BIP	0.11160426	0.41728955		
BPHL	-1.0471605	4.77816811		4.77816811
BPNT1	-0.6265055	3.54322724		
BSN	-0.5114231	5.14696493		
C1QBP	-0.2993691	2.15595423		

C1TC	-0.3021154	2.184316		
C1TM	-0.5505427	3.08618168		
CA2D1	0.12491289	0.44288665		
CACP	-0.4414305	3.47177228		
CAD13	0.18082654	0.87363417		
CADH2	-0.1011786	1.88535453		
CADM1	0.13905215	0.51087223		
CADM2	-0.304871	4.11941778		
CADM3	-0.0076366	0.03912542		
CADM4	0.07592754	0.45594049		
CAH2	-1.143455	5.17144461		5.17144461
CALB2	-0.3484481	1.96805372		
CALM1	-0.0390837	0.21746373		
CALR	-0.2850423	3.03198274		
CALX	-0.1857078	1.25774545		
CAMKV	-0.5057326	3.94950678		
CAN2	-0.6696848	2.44225733		
CANB1	-0.1603983	2.41466352		
CAND1	-0.4926575	4.02521067		
CAP1	-0.432537	3.34014645		
CAPS1	-0.6906606	4.02082135		
CAPZB	-0.1137863	0.9534055		
CATB	-0.2664307	2.04827959		
CATD	1.38788611	2.06404327	2.06404327	
CAZA2	-0.0161628	0.15812538		
CBPE	-0.0333246	0.23592133		
CBR1	-0.4071032	2.94999881		
CBR4	0.10525032	0.57093794		
CC50A	0.10373368	1.08009688		
CCG8	-0.1795888	3.03475991		
CD166	0.11932912	0.70914428		
CD47	0.01838927	0.13377742		
CD81	-0.5838768	3.75249457		
CDC42	-0.8610247	6.06725428		
CDS2	-0.1066394	0.58917166		
CEND	0.12729177	0.67305967		
CH10	-0.1555009	0.78242575		
CH60	-0.1189855	0.62531362		
CHCH2	-0.7443741	3.47944789		
CISD1	-0.0121063	0.11509008		
CISY	-0.1606388	0.92494086		
CLAP2	-0.0013299	0.00338755		
CLCB	-0.0658096	1.45266067		
CLD11	0.2804192	0.59926909		
CLH1	-0.1596788	1.66752201		
CLIC4	0.15614263	1.08110291		
CLUS	0.74347882	2.12816073		
CLYBL	-0.3068371	1.37672366		
CMPK2	-0.8755108	5.82255754		
CN37	0.02828891	0.08378512		
CNTFR	-0.2222841	1.60489731		
CNTN1	-0.1022528	0.57800162		

CNTP1	-0.3616756	2.31689601		
CNTP2	-0.524559	3.0940421		
COF1	0.04116702	0.47839248		
COF2	-0.1991525	2.07002193		
COQ3	-0.2442627	2.62174579		
COR1A	-0.631151	3.03365607		
COX2	-0.0283092	0.58191036		
COX3	-0.5180708	4.41977855		
COX41	-0.0384842	0.59550663		
COX5A	-0.020776	0.23258225		
COX6C	0.11892579	1.41420242		
CPLX2	0.02972926	0.2902297		
CPNE6	-0.1834608	0.85392075		
CPT1A	-0.9057448	5.60356741		
CPT2	-0.4386372	2.97268895		
CRYAB	0.27083541	1.26509723		
CSK21	0.0552909	0.47439403		
CSKI1	-0.6636731	4.42230289		
CSKP	-0.2418019	4.38249803		
CSPG2	-0.1588382	1.24624239		
CSPG5	0.04012903	0.58609697		
CSRP1	0.31781919	2.05961473		
CTBP1	-0.511234	3.79206927		
CTNA2	-0.369814	6.43986184		
CTNB1	0.18432003	1.05074889		
CTND2	0.09260574	1.22538938		
CX6B1	0.09802117	1.75906029		
CX7A2	-0.3045389	1.82228791		
CXA1	-0.191206	1.44833545		
CY1	0.0083781	0.24009784		
CYC	-0.2510925	1.37180895		
CYFP2	-0.1768651	1.07780449		
CYRIB	-0.0861004	1.29963105		
D39U1	-0.2666666	2.00182506		
DC1L1	-0.4352935	5.38541924		
DCE1	0.07702491	2.45754788		
DCLK1	-0.0661376	0.63502758		
DCTN2	-0.0230155	0.16359609		
DDAH1	-0.2153718	3.7309531		
DECR	0.18732096	0.69535186		
DEST	-0.2024865	1.7020993		
DHB4	-0.0307323	0.20546303		
DHB8	0.20353903	0.7136375		
DHE3	-0.0150133	0.06046425		
DHPR	0.05270047	0.21831768		
DHRS1	0.86442064	1.04971032		
DHRS4	-0.0961343	0.88769099		
DJC11	-0.1315831	1.89408723		
DLDH	-0.1941437	1.58922935		
DLG1	-0.1585146	1.92505499		
DLG2	-0.4292531	2.89011643		
DLG4	-0.2930295	4.04304363		

DLGP1	-0.506288	4.02784414		
DLGP2	0.04919788	0.56732637		
DLGP4	-0.4494858	4.76401944		
DLRB1	-0.0443719	0.30047158		
DMXL2	-0.1788676	3.15370856		
DNJA2	-0.1588217	1.46786202		
DNJA3	-0.4649674	2.41740046		
DNJC5	-0.0107672	0.16486625		
DNM1L	-0.7517667	4.47102662		
DPP10	-0.5714219	3.64342505		
DPP6	-0.2653261	3.33628766		
DPYL1	-0.5921125	3.26766716		
DPYL2	-0.1917141	2.38076168		
DPYL4	-0.5025668	3.4606143		
DPYL5	-0.5858006	3.50465646		
DYHC1	-0.1957305	2.50256971		
DYL1	0.80604301	2.25864924		
DYN1	-0.6082988	4.16351503		
DYN3	-0.6521517	4.24127329		
E41L1	-0.6922005	5.39503999		
E41L2	-0.3185563	3.08852811		
EAA1	0.02516657	0.09724035		
EAA2	0.09389022	0.4486696		
ECH1	0.30683429	0.86387018		
ECHA	0.04972885	0.34741061		
ECHB	0.09914697	0.49492964		
ECHM	0.22347784	1.45158099		
ECI1	-0.3238411	1.56445603		
EF1A1	0.05674354	0.16877102		
EF1A2	-1.1130114	4.4870328		4.4870328
EF1D	0.15398863	0.90468992		
EF2	-0.2203618	1.72998616		
EFGM	-0.5051886	2.65326887		
EFHD2	-0.3897703	2.19328523		
EFTU	0.03122127	0.14972236		
EHD3	-0.1537884	1.78173315		
ENDD1	0.18147865	1.13833678		
ENOA	-0.2975192	1.79094459		
ENOG	-0.2985906	1.60003433		
ENPL	-0.1059584	1.24148034		
ENTP2	0.44292174	1.49000788		
EP15R	-0.4757467	3.3110313		
ERC2	0.10296771	0.85938042		
ETFA	-0.3000395	1.57872956		
ETFB	0.36308867	1.09173996		
ETFD	-0.0003334	0.00237413		
ETHE1	0.00278859	0.00849911		
EXOG	-0.415854	3.40826034		
EZRI	-0.0194992	0.15458574		
F136A	-0.2251407	0.88187246		
F162A	-0.1590081	1.66901908		
FABP5	-0.4753955	3.53098403		

FABPH	-0.1318927	0.68942861		
FAHD2	-0.160702	0.75857365		
FARP1	-0.0369451	0.39547361		
FAS	-0.2329615	2.59590584		
FERM2	0.0805641	0.18826852		
FIS1	-0.2470897	2.5615383		
FLOT1	-0.010907	0.17307826		
FLOT2	-0.0686446	0.79698129		
FSCN1	-0.4800697	3.57717801		
FUMH	-0.3800679	2.49393593		
FUND2	0.66196997	2.50623817		
G3P	-0.1445506	2.35852438		
G6PI	-0.6562055	3.77329532		
GABR1	0.09298769	0.61597619		
GABR2	-0.062853	0.38705682		
GABT	-0.3945545	1.99031452		
GAL3A	-0.1490914	0.56143336		
GANAB	-0.2970251	2.48621176		
GBB1	0.10150833	0.64061431		
GBB2	-0.4302186	2.67487537		
GBB4	0.11250908	0.70886315		
GBG12	0.45017901	1.92240192		
GBG2	0.93184175	2.11441813	2.11441813	
GBG7	0.23370589	0.87871884		
GBRA1	-0.0026933	0.01753704		
GCDH	-0.2072916	0.96957904		
GD1L1	-0.4033065	2.55101649		
GDAP1	0.10595223	2.0836251		
GDIA	-0.2850606	1.96462885		
GDIB	-1.758919	4.63591185		4.63591185
GDIR1	-0.6556336	3.370635		
GDS1	-0.3751479	4.08566577		
GEPH	-0.6194882	6.14096878		
GFAP	0.76904575	4.87497293		
GHC1	0.00592161	0.1097561		
GHC2	0.06638195	0.77488625		
GLNA	0.00603781	0.04656042		
GLOD4	-0.5785566	2.93398853		
GLPK	0.02089944	0.7161505		
GLRX5	0.20743147	0.5663227		
GLSK	-0.3729821	2.17005519		
GLU2B	0.6880912	2.56678214		
GNA11	-0.6036077	3.45724207		
GNA13	0.04526759	0.16745451		
GNAI1	-0.3557686	3.83528502		
GNAI2	-0.215138	1.47877394		
GNAO	0.05862613	0.30684794		
GNAQ	0.13828778	0.68190261		
GNAS2	-0.286296	1.49952784		
GNAZ	-0.0376359	0.2535874		
GNB5	-0.4113027	3.81343972		
GPDA	-0.4089212	4.71836515		

GPDM	0.07991013	1.68823652		
GPM6A	0.04216908	0.22707506		
GPM6B	-0.0285098	0.12827219		
GPX4	-0.1939799	1.49919133		
GRIN1	-0.2318114	2.23808817		
GRP75	0.00900716	0.03023198		
GRPE1	-0.3249558	1.59350897		
GSTM1	0.193227	0.94324286		
GSTP1	-0.1630279	3.22771719		
GTR3	-0.1549502	2.49445912		
GUAD	-0.4320815	3.4781983		
H14	0.73021568	1.20301112		
H2B1C	0.07772643	0.33125298		
H4	0.37239614	0.81382546		
HACD3	0.18895841	0.47219465		
HBA	0.32445936	0.3726546		
HCD2	-0.2466568	1.724135		
HCDH	-0.1341337	0.50261101		
HECAM	0.21884042	1.31876088		
HEMH	-0.3172574	2.11896983		
HIBCH	-0.2975735	1.52311813		
HINT2	-0.1422887	0.68426668		
HINT3	0.36688464	3.60517341		
HMGCL	0.01252125	0.03470723		
HNRPK	-0.2097875	0.56243472		
HOME1	-0.1371538	1.74528649		
HPCA	0.46515702	2.03729551		
HPLN4	-0.2179995	0.93955962		
HS105	-0.2668612	2.48869958		
HS12A	-0.3554789	2.24539392		
HS74L	-0.6711366	3.63872872		
HS90A	-0.3176748	2.49807433		
HS90B	-0.4904057	4.22201313		
HSDL1	-0.3904479	3.09218059		
HSDL2	-0.1294517	1.19644384		
HSP74	-0.640487	5.54257157		
HSP7C	0.15745451	3.01846201		
HTRA2	0.27574999	1.51714505		
HXK1	-0.0034285	0.0392721		
I3ITR1	-0.1123259	0.35196013		
I5P1	0.02923423	0.1101294		
ICAM5	-0.2544237	3.0212991		
IDH3A	-0.0525301	0.24253139		
IDHG1	-0.2210416	1.28697735		
IDHP	-0.300724	1.5332802		
IF5A1	-0.8083445	5.32673682		
IGSF8	-0.4788369	3.78941986		
IMPA1	-0.3482047	2.87808193		
IPYR2	-0.6836414	3.13681898		
IQEC1	0.02692056	0.18469815		
IQEC2	-0.5577988	4.04877168		
ISC2A	-0.5139855	2.71185991		

ISCA2	-0.6735093	3.65446644		
ITPR1	-0.3201574	1.9787002		
IVD	-0.0270365	0.07788244		
KAD1	-0.7440186	3.73613638		
KAD3	-0.3926961	1.88456801		
KAD4	-0.3917073	2.28563724		
KAP2	-0.0086927	0.1460893		
KAP3	-0.6178571	3.5797347		
KCC2A	0.01169014	0.03194853		
KCC2B	-0.2605309	2.15068993		
KCC2G	-1.1639332	4.84324574		4.84324574
KCNA2	-0.3819562	3.37127616		
KCNC3	-0.0627528	0.63238797		
KCRB	-0.1966759	2.28306372		
KCRU	-0.2862164	1.5201139		
KGD4	-0.2947017	2.33054642		
KIF2A	-0.0243502	0.26976019		
KINH	0.63372991	3.90307951		
KPCG	-0.7016982	2.72959612		
KPYM	-0.2360336	1.38538914		
L1CAM	-0.1574938	1.77105525		
L2HDH	-0.1625474	1.3894782		
LACTB	0.08413909	2.20229732		
LAMP1	0.3497975	4.62980671		
LANC1	-0.3888775	4.24699086		
LANC2	-0.3049356	4.21111588		
LASP1	-0.3144024	3.26974325		
LAT1	0.23379405	1.74048911		
LDHA	-0.3543605	2.0011236		
LDHB	-0.4215137	3.08769144		
LETM1	0.06152708	1.02824404		
LGI1	-0.082006	0.37482589		
LGI3	0.3732739	0.6384228		
LIGO1	-0.1119875	0.67616366		
LIS1	-0.253671	2.14277832		
LONM	-0.353385	2.52817509		
LPPRC	-0.2067153	1.42051299		
LRP1	-0.2443821	1.48936301		
LSAMP	0.05481298	0.29517565		
LY6H	-0.2575241	3.23022764		
M2OM	-0.1252256	2.65277579		
MAAI	-0.2986926	1.43419654		
MACD1	-0.1096044	0.41721608		
MACF1	-0.4181676	3.74445187		
MAG	-0.0329671	0.092842		
MAL2	0.07270039	0.9675491		
MAOM	-0.4435895	2.26657594		
MAON	-0.3838702	3.64886565		
MAP1A	-0.2647941	1.59082103		
MAP1B	0.1418913	0.52169107		
MAP4	-0.39158	3.55498621		
MAP6	-0.1144303	0.76069746		

MARC2	0.11088496	0.80524564		
MARCS	-0.273967	3.08833895		
MARE3	-0.2479466	3.47853374		
MBP	0.23238429	0.2700099		
MCCA	-0.2784761	1.66454197		
MCCB	-0.0566802	0.28391343		
MCU	-0.256287	4.08390924		
MDHC	-0.3827046	2.67899155		
MDHM	-0.011224	0.03639412		
MECR	0.09381266	0.43616693		
MFN2	-0.3367604	4.30881278		
MIC10	0.29659877	2.06172656		
MIC19	0.13025839	1.53152976		
MIC25	-0.1269416	1.21287662		
MIC26	0.07363958	0.75812269		
MIC27	-0.0434561	0.62336198		
MIC60	0.09302764	2.21263849		
MICU3	-0.519446	5.00360377		
MIRO1	-0.0682403	1.46785881		
MITOK	-0.106329	0.47218638		
MITOS	0.09998487	0.60581891		
ML12B	0.48341557	1.11505764		
MMAB	-0.4686498	2.31727695		
MMSA	-0.2811305	1.5537256		
MOES	0.82467978	1.67124193	1.67124193	
MOG	0.13325261	0.29710528		
MOT1	-0.4858587	3.10631062		
MP2K1	-0.1256818	0.90866325		
MPC1	-1.0496786	6.56278768		6.56278768
MPC2	-0.4112973	3.39678431		
MPP2	-0.28253	3.0717444		
MTAP2	-0.0578226	0.1601685		
MTCH1	0.04202205	0.48143791		
MTCH2	-0.1483087	2.56128225		
MTX1	-0.2719788	2.97230901		
MTX2	-0.2705972	2.30570963		
MUTA	-0.9151744	4.06300996		
MY18A	0.46961044	2.52922827		
MYH10	-0.3013638	1.49935914		
MYL6	0.61749034	1.04104458		
MYO1D	0.60409908	1.12824537		
MYO5A	-0.3609069	3.01592134		
MYO6	0.16914801	0.88861947		
MYPR	0.28588887	0.44715231		
NAC2	-0.131941	1.94990346		
NAKD2	-0.2238417	1.65062587		
NB5R1	-0.1355806	1.48612251		
NB5R3	0.23637974	3.02415842		
NCAM1	0.05732836	0.28720869		
NCAM2	-0.0470677	0.25713846		
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NCDN	-0.3892233	3.13806288		

NCKP1	-0.6386785	4.40003755		
NDKA	0.25522664	1.27873692		
NDRG2	-0.2733248	2.5883844		
NDUA2	0.23805855	2.33393964		
NDUA4	-0.0566736	0.98669937		
NDUA5	0.36145048	3.14482466		
NDUA6	0.37339436	4.16185359		
NDUA7	-0.16097	1.92065423		
NDUA8	-0.231345	3.69022291		
NDUA9	-0.4011986	4.76826904		
NDUAA	-0.0938979	1.99420796		
NDUAB	0.11955572	1.40284167		
NDUAC	-0.1579288	3.22013795		
NDUAD	0.0548167	1.24015187		
NDUB4	0.1465654	1.15644956		
NDUB5	-0.2691156	3.29880108		
NDUB6	-0.7417553	4.68129218		
NDUB7	0.28213493	2.77070172		
NDUB8	-0.2812329	3.12754192		
NDUB9	0.03597377	0.81219064		
NDUBA	0.14552275	2.39061138		
NDUC2	0.03858642	0.78621418		
NDUS1	0.03028803	0.65812837		
NDUS2	-0.3142884	3.82825311		
NDUS3	0.0068968	0.11625046		
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NDUS6	0.04245017	0.48997173		
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NDUS8	-0.1418638	1.90412956		
NDUV1	0.01345566	0.21399927		
NDUV2	0.13650178	0.80170957		
NDUV3	-0.0949576	2.23853587		
NECP1	-0.2246895	2.69648403		
NEGR1	0.10007189	0.67866174		
NEUM	0.01542368	0.18296249		
NF1	0.1192608	0.45824755		
NFASC	0.10479281	0.73812135		
NFH	0.12163894	0.55143728		
NFL	0.0815244	0.36605156		
NFM	0.06081688	0.26465645		
NFS1	-0.2444027	1.50498007		
NIPS1	-0.2315041	2.41600257		
NIPS2	-0.1315349	0.88629103		
NLGN2	0.29461202	2.35530373		
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NMDZ1	-0.0314681	0.34843471		
NNRD	-0.2548519	1.8628602		
NOE1	-0.1436245	1.88123476		
NPTN	-0.03289	0.29179585		
NPTX1	0.14162622	1.33537079		
NPTXR	0.53522917	2.1988136		

NRX1A	-0.483995	4.61121153		
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NT5D3	-0.413446	2.79476543		
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NU5M	-0.1791295	1.52493749		
OAT	-0.5191419	2.50210001		
OCAD1	0.01868383	0.17040778		
OCAD2	0.00155428	0.00691476		
ODB2	0.21009662	1.94118665		
ODO1	-0.1573523	1.35318941		
ODO2	-0.0288051	0.22587675		
ODP2	0.09734676	0.87995243		
ODPA	-0.1037844	1.17606115		
ODPB	-0.0168401	0.1529277		
ODPX	-0.0490786	0.43616326		
OMGP	-0.0546915	0.48211654		
OPA1	-0.0740162	1.31847837		
OTUB1	-0.5544024	2.89886447		
OXR1	-0.3642835	3.10022553		
P5CR2	-0.0494668	0.28754513		
P5CS	-0.1520481	0.77016361		
PACN1	-0.4645788	2.87993656		
PALM	-0.0737578	1.06039759		
PALS2	0.24901992	1.46001624		
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PCLO	-0.7412399	5.54187485		
PCS1N	-0.141066	0.63335829		
PDIA1	-0.191196	2.11185116		
PDIA3	0.14119484	0.49587488		
PDK1	0.17238431	0.65326428		
PEA15	-0.2480338	2.3393549		
PEBP1	-0.3168855	2.06402532		
PFKAL	-0.1806739	2.79061226		
PFKAM	-0.3576128	3.30175869		
PFKAP	-0.3508247	4.21222034		
PGAM1	-0.421208	2.21616811		
PGK1	-0.4338492	3.18746267		
PGM1	-1.0984372	4.20773521		4.20773521
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PHB2	-0.1272176	3.1041024		
PHF24	-0.1577357	1.90138574		
PHYIP	-0.538349	3.26238028		
PI4KA	-0.1878007	1.61794211		
PIMT	-0.1898425	1.68605619		
PLCB1	-0.2121862	1.50005672		
PLEC	-0.0237948	0.48663567		
PLPP3	0.37472699	1.52467097		
PLPR4	0.20889485	1.42308951		
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PP2BA	-0.666751	4.19892803		

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PRDX1	-0.0063853	0.09757191		
PRDX2	0.08119294	0.85246986		
PRDX3	-0.2344431	1.61203146		
PRDX5	0.00911963	0.02674416		
PRDX6	0.02987139	0.25177016		
PROD	-0.0082024	0.03313191		
PROF1	-0.2349861	2.34232853		
PROF2	0.08722354	1.06159		
PRRT2	-0.5900548	4.1569002		
PSA	-0.7465597	5.8852016		
PSA5	0.23227457	1.62014452		
PSB5	-0.0898509	0.9166163		
PTGR3	-0.7093524	3.0570354		
PTPR2	-0.0601697	0.45108352		
PTPRA	-0.0389489	0.21968106		
PTPRZ	-0.7638611	3.32280665		
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PXL2A	0.08263417	0.43043474		
PXL2B	-0.7760967	4.44534151		
PYC	-0.2794106	1.75368822		
PYGB	-0.2692507	3.01035329		
PYGM	-0.7482389	3.69963301		
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QCR2	0.04551298	0.68637436		
QCR7	-0.3019565	3.18669591		
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QORL2	0.17659687	0.4161305		
RAB10	0.04896051	0.35456114		
RAB14	0.05234548	0.47698655		
RAB18	-0.1318569	0.60635715		
RAB21	0.02649403	0.08125096		
RAB2A	-0.0843106	3.01933806		
RAB35	-0.3379412	4.13251626		
RAB3A	-0.0020561	0.01313502		
RAB3C	-0.0676088	0.86796656		
RAB5C	-0.074471	0.69733378		
RAB7A	0.08536177	0.56884375		
RAB8B	-0.3041801	1.85041774		
RALA	-0.0525558	0.2255289		
RASH	0.55729975	2.89054036		
RB11B	-0.1519815	1.75518566		
RDH13	0.51201694	2.07830907		
RDH14	-0.2410166	2.82919411		
REEP5	0.20270537	1.17334685		
RHOA	-0.0244652	0.21620687		
RHOB	0.27505344	2.32735796		

RHOG	0.19897443	0.60069359		
RIDA	0.2318128	1.85967439		
RL11	0.27726053	0.98934043		
RL12	0.08623653	0.2722361		
RL13	0.16574973	0.39162331		
RL14	0.36878649	0.59953746		
RL15	0.35098928	3.30614721		
RL18	0.31229506	0.82113304		
RL27	0.17956028	0.33949084		
RL28	0.42257454	1.00550458		
RL3	0.12077328	0.49694583		
RL30	0.49738615	0.72809138		
RL4	0.23520945	0.47754845		
RL6	0.14352148	0.44267827		
RL7	0.02623397	0.06949033		
RL8	0.24742555	0.5471017		
RLA2	0.29817467	0.93039179		
RM12	-0.0692654	0.44897906		
RMND1	0.17987816	1.14677722		
ROCK2	0.01713253	0.18363391		
RP3A	-0.4954588	4.57555085		
RPGF4	-0.3997535	4.73759791		
RPN1	-0.5893884	3.31747981		
RS2	-0.5290237	1.85534899		
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RS8	-0.0900265	0.18034779		
RT07	0.14137665	0.49256638		
RT22	-0.2761318	1.12286013		
RT23	-0.3640862	2.17349408		
RTN1	-0.1282503	1.00424315		
RTN4	-0.4319264	3.02481724		
S10A1	-0.0828108	0.54929841		
S12A2	0.12156839	0.29397969		
S12A5	-0.0989445	0.97147566		
S2512	0.09180019	2.40314384		
S2540	0.26397429	2.20116638		
S2546	-1.1161012	5.69326891		5.69326891
S2551	-0.1946062	2.70726353		
S27A4	0.02768045	0.09446516		
S38A3	-0.0247865	0.28308417		
S39AC	1.26388824	0.85816605		
S4A10	-0.1541938	1.95449152		
S4A4	-0.1960088	2.39498143		
S6A11	-0.0200234	0.14467503		
SAHH2	-0.7833612	4.31030173		
SAHH3	0.25848515	1.33145309		
SAM50	-0.0352663	1.58092724		
SAP	0.92685126	2.8407923	2.8407923	
SATT	-0.1845595	1.43625737		
SC6A1	-0.049979	0.89934782		
SCAI	-0.3248475	3.73253954		
SCAM1	0.18056623	3.36309099		

SCAM5	-0.0900037	0.92895637		
SCMC2	-0.0761001	1.35456177		
SCMC3	-0.5513984	3.57452131		
SCN2A	0.19033769	1.4984328		
SCOT1	-0.2519284	1.62758226		
SCP2	-0.1903491	1.20466803		
SCPDL	-0.070312	2.10929065		
SCRB2	0.88015684	4.03550973	4.03550973	
SCRN1	-0.5651661	2.87784686		
SDHA	0.06694411	0.89147881		
SDHB	-0.0427158	0.86946883		
SEPT11	0.18990204	1.99582019		
SEPT2	0.5519553	1.54083372		
SEPT3	-0.1941638	2.28474508		
SEPT5	-0.0388425	0.60838924		
SEPT7	-0.154861	3.15466106		
SEPT8	0.0463498	0.30684905		
SEPT9	-0.3814424	2.96307924		
SERA	-0.2022545	2.48139123		
SERC	-0.1479025	1.04793102		
SFXN1	0.09078448	1.78394255		
SFXN3	0.09191362	2.18652716		
SFXN5	0.09748151	0.68425461		
SH3G1	1.29695548	3.68909128	3.68909128	
SHAN1	-0.5970115	3.08085954		
SHAN2	-0.7188885	4.1734098		
SHAN3	-0.9010434	4.72207494		
SHLB2	-0.5586871	3.49885469		
SHPS1	-0.0623156	0.49489644		
SHSA7	-0.331546	4.74371926		
SIR2	0.21764205	0.64623035		
SKP1	-0.2188524	3.09761078		
SNAA	-0.3336862	3.44325795		
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SNAG	-0.0101023	0.17356167		
SNG1	0.19677558	2.69867348		
SNG3	0.20315486	3.52355146		
SNP25	-0.2053303	1.7201533		
SNP47	-0.1613007	1.27411749		
SNPH	-0.4798952	3.10517113		
SNX1	0.17922356	2.29257161		
SODC	-0.6508438	2.92855579		
SODM	-0.4225607	2.3135311		
SOGA3	-0.2029336	1.98947142		
SPG7	-0.4652929	3.11250925		
SPRE	-0.9515847	5.43253041		
SPRY4	-0.0506105	0.11239936		
SPTB1	-2.2354179	6.13030251		6.13030251
SPTB2	0.85752467	3.6705531	3.6705531	
SPTN1	0.08815166	0.95204644		
SQOR	0.11141984	0.50508465		
SRC	0.08024587	0.29293532		

SRC8	-0.320953	1.91121437		
SRCN1	-0.0142787	0.11994222		
SSDH	-0.0561241	0.20128356		
STAM1	0.73257265	1.66231189		
STB5L	0.20800527	1.10431655		
STML2	0.29959005	2.35474484		
STMN1	0.15624019	0.68959864		
STX12	-0.1164832	1.1600293		
STX1A	0.01725328	0.22749676		
STX1B	0.01200743	0.16264431		
STX7	0.62364903	4.31187805		
STXB1	-0.1279212	2.15130661		
SUCA	-0.0649727	0.27388573		
SUCB1	-0.0237771	0.08267803		
SUCB2	-0.101995	0.40798522		
SV2A	-0.2364739	3.29520291		
SV2B	-0.3616605	4.79328712		
SYGP1	-0.5856222	5.26542147		
SYIM	-0.8626038	4.66659368		
SYN1	-0.2222414	4.1245569		
SYN2	-0.430905	6.08149223		
SYN3	0.29253724	3.49090908		
SYNJ1	-0.3097187	3.71170843		
SYNPO	-0.7115146	3.85168013		
SYPH	0.07366922	0.36859047		
SYT1	-0.0402438	0.65585741		
SYT2	-0.4556796	4.20003422		
SYUA	0.07403854	1.67454884		
SYUB	-0.2008507	2.35866571		
TAGL3	-0.1057682	0.99541341		
TAU	-0.0912309	0.98723877		
TBA4A	0.09033617	0.18197213		
TBB3	-0.338764	1.34656714		
TBB4A	0.16610252	0.3107137		
TBB5	0.50911436	1.09637766		
TCPA	-0.029096	0.22938458		
TCPB	-0.6076692	4.82582308		
TCPD	-0.355232	4.37552537		
TCPE	-0.644453	4.62650941		
TCPG	-0.6815801	3.47034437		
TCPH	-0.3479893	4.04722349		
TCPQ	-0.3865442	3.00043439		
TCPZ	-0.2871782	2.36557442		
TDRKH	0.15239759	1.08858897		
TENR	-0.6287716	2.3132816		
TERA	-0.5612494	4.37161767		
THEM4	0.00266933	0.00822343		
THIKA	-0.0113012	0.12839613		
THIL	-0.0298743	0.11008031		
THIM	-0.3378075	1.9009369		
THIO	-0.0447645	0.49636801		
THTM	-0.363132	3.3901518		

THTR	0.01213181	0.0253462		
THY1	0.14521226	0.69961342		
TIM10	0.28235654	4.56798092		
TIM13	-0.0099633	0.03977459		
TIM22	0.27557361	1.85192675		
TIM44	-0.097196	0.76825187		
TIM50	-0.0349501	0.37757478		
TIM9	0.04715802	1.04950305		
TKT	-0.2254574	2.20649044		
TLN2	-0.8461262	4.90502295		
TM186	0.48386629	3.02875613		
TMM65	-0.4867256	4.00068705		
TMOD2	-0.6605288	4.32183234		
TMX2	0.52362671	1.48488814		
TOM22	0.17848196	1.6080878		
TOM70	-0.1098963	2.11656001		
TPD54	0.10100853	0.69226712		
TPIS	-0.2514969	1.83542585		
TPM1	0.00771601	0.07641696		
TPP1	1.7525826	2.23230712	2.23230712	
TPPP	-0.3205765	3.54447288		
TPPP3	0.18934178	2.03747538		
TRAP1	-0.1983262	1.59653055		
TRFE	0.15056543	0.59604924		
TSN2	0.29929894	0.62957892		
TWF1	0.30588748	1.69758611		
TXTP	0.03531841	0.65435403		
UBA1	-0.1600587	1.34372771		
UBE2N	-1.0021576	3.26514471		
UBP5	-0.5066194	2.9806974		
UCHL1	-0.4131396	2.40901969		
UCRI	-0.1335901	1.45625005		
VA0D1	-0.2033472	2.78796917		
VAC14	0.18222906	1.97917877		
VAMP1	-0.0218301	0.41209877		
VAMP2	0.00446542	0.0453283		
VAPB	0.22708138	1.04986129		
VAT1	0.20530851	2.95171897		
VATA	-0.0728548	0.50555762		
VATB2	-0.110205	1.40971141		
VATC1	-0.0087729	0.06997264		
VATD	-0.620052	5.07555956		
VATE1	-0.0112623	0.13099398		
VATF	0.11473379	0.95190694		
VATG1	-0.181218	1.19408407		
VATG2	-0.3108166	3.39857762		
VATH	0.04716853	0.28026223		
VDAC1	0.08925316	2.85904684		
VDAC2	0.0993344	2.76156417		
VDAC3	0.05536137	0.8763474		
VGF	0.52600299	2.46877705		
VIAAT	-0.1044758	1.1586232		

VIME	0.40392986	3.64147187		
VISL1	-0.5932098	4.11085179		
VPP1	0.04338302	1.11048065		
VPS35	-0.4109982	3.5728704		
VWA8	-0.3061693	1.72195852		
WDR1	-0.7076164	4.34174045		
WDR37	-0.4650551	5.36344286		
WDR7	-0.2791203	5.12789436		

Data Description: Fig. 3O - Data underlying heatmap of percent (%) abundance of top 25 proteins identified in all WT timepoints with significant progressive accumulation in lipofuscin. Fig. 3P - Heatmap of percent (%) abundance of top 25 proteins identified in all PPT1 KO timepoints with significant progressive accumulation in lipofuscin. Inclusion criteria included positive fold-change for each timepoint comparison with at least 2 of 3 comparisons reaching significance threshold. Data are ordered by average abundance in final timepoint.

Fig. 3O - Proteins with significant progressive abundance increase in WT lipofuscin with time

	WT-12			WT-18			WT-24			Positive Fold-Change?		Unpaired t test		
										WT-18 vs WT-12 Fold Change	WT-24 vs WT-18 Fold Change	WT-12 vs WT-24 P-Value	WT-12 vs WT-18 P-value	WT-18 vs WT-24 P-value
GABT	0.34951281	0.31331086	0.32983442	0.74370575	0.8160556	0.81196475	0.92986041	1.03353675	1.00909743	2.38926791	1.25330433	3.68706E-05	5.73445E-05	0.00688563
SPTB1	0.00881196	0.00819584	0.00590729	0.02054064	0.01294448	0.01279515	0.72148062	0.72018198	0.76192268	2.01964196	47.6139219	7.62109E-07	0.04507852	8.4491E-07
ODPB	0.30284062	0.28033819	0.31696688	0.36512965	0.37940754	0.37574912	0.40183624	0.43323119	0.42542085	1.24456112	1.12514833	0.001082133	0.003088016	0.01074103
SYN2	0.13987693	0.18649371	0.1793516	0.32555614	0.33586488	0.32977347	0.39461909	0.37927732	0.38712617	1.95995828	1.17133679	0.000134763	0.000397525	0.00044985
NDUAA	0.19945319	0.19989259	0.20475962	0.20770011	0.21814119	0.22269809	0.23371768	0.24543825	0.2391134	1.07355356	1.10751844	0.000553097	0.035672723	0.01411469
MMSA	0.06031955	0.06259463	0.05668183	0.16371954	0.17903886	0.17613481	0.21152138	0.2309417	0.22752613	2.88922463	1.29118901	1.25271E-05	2.26858E-05	0.00270172
ALDH2	0.12029553	0.11364498	0.10716015	0.18188637	0.19608454	0.18892352	0.2010905	0.21498709	0.21705149	1.66195647	1.11683773	0.000101414	0.000175277	0.02702533
PGK1	0.03694727	0.05026017	0.03967587	0.15131138	0.14409549	0.14465774	0.1695667	0.15565692	0.15681593	3.46826206	1.09538361	3.96506E-05	2.38073E-05	0.04952506
ACADL	0.05484885	0.04703981	0.04395866	0.12120797	0.14708053	0.13767037	0.15656376	0.16339331	0.16064566	2.78345109	1.18387051	8.80804E-06	0.00045829	0.03343571
ETFA	0.06462763	0.06336328	0.0573613	0.10941573	0.11766791	0.11496296	0.13625834	0.15328741	0.14616878	1.84538723	1.27384547	0.000104015	9.36655E-05	0.00476046
AATC	0.01434122	0.02317247	0.02459488	0.08763146	0.11251031	0.10913283	0.15039962	0.13212158	0.12843451	4.97957962	1.32877292	0.000101568	0.000612901	0.03051981
HS90A	0.03266097	0.04385142	0.04117871	0.07677819	0.0870531	0.08453028	0.10065186	0.09557005	0.08948214	2.11028328	1.15055535	0.000277134	0.000680234	0.04958634
GDIB	0.0026245	0.00239962	0.00264075	0.05243167	0.05688267	0.05425845	0.08396146	0.07374282	0.07387263	21.3405919	1.41574221	2.50597E-05	2.29735E-06	0.00332782
SODC	0.0074637	0.01043878	0.01268799	0.06094638	0.04986036	0.05148147	0.08392945	0.06850399	0.07095484	5.3051889	1.37649109	0.000214472	0.000312056	0.02606131
AMPH	0.04085616	0.04098876	0.03647566	0.06080518	0.06695487	0.06381637	0.07521156	0.07135412	0.06932238	1.61913011	1.12690312	0.000139397	0.000455538	0.03073567
TERA	0.01590931	0.0293624	0.01984603	0.03329307	0.04228167	0.04050298	0.05915108	0.05433448	0.05217837	1.78258191	1.42716392	0.001727591	0.024803094	0.00857907
AL7A1	0.00295028	0.00515246	0.00318079	0.03135369	0.04067957	0.03760906	0.05439208	0.05487742	0.05298549	9.71702092	1.47985744	6.12803E-07	0.000317833	0.00332383
RTN4	0.02341231	0.02749801	0.02324124	0.04787022	0.05020756	0.04864827	0.0536727	0.05042512	0.05446129	1.97873182	1.08064731	0.000111433	9.88458E-05	0.04927884
ECI1	0.02776173	0.02222191	0.02463412	0.03115687	0.03626464	0.03578003	0.04707823	0.04947427	0.05162255	1.38306933	1.43578327	0.000292088	0.014035272	0.00200417
SIR2	0.02383145	0.02325301	0.01968663	0.04204585	0.03918342	0.03885884	0.04316695	0.04479938	0.04728036	1.79904388	1.12622874	0.000207501	0.00042054	0.03213863
ANK3	0.01356676	0.01575337	0.0117191	0.01825635	0.01744725	0.01735963	0.04278488	0.04326346	0.04651283	1.25298829	2.49817368	5.09622E-05	0.028884831	2.5333E-05
CAMKV	0.01535852	0.02412112	0.02293331	0.02860443	0.03468968	0.03163424	0.04292728	0.0379764	0.03921998	1.5209721	1.26541373	0.003518563	0.029207755	0.02178975
SUCB2	0.01003703	0.01128142	0.00895782	0.02611147	0.02899393	0.02817336	0.03561454	0.03940035	0.0377306	2.75062734	1.35383257	2.82127E-05	8.44506E-05	0.00212205
GSTP1	0.01682556	0.0215618	0.01961939	0.03368636	0.03071023	0.03185561	0.03798464	0.03588023	0.03719651	1.65932765	1.153858	0.000300378	0.001425917	0.00967609
CAZA2	0.02222957	0.02779429	0.02213962	0.03069751	0.03216527	0.03150851	0.03793146	0.03551998	0.03565863	1.30774295	1.15617876	0.003707209	0.018134378	0.00524879
CTNA2	0.02220977	0.02487718	0.02345843	0.03102979	0.03197665	0.02911862	0.03436066	0.0343592	0.03426553	1.31677236	1.11444376	0.000172939	0.00237963	0.00113392
PFKAP	0.00716456	0.00947014	0.00923084	0.0247053	0.0279602	0.02771785	0.03294426	0.0312311	0.0296789	3.10773805	1.1675834	4.53423E-05	0.000141777	0.03331603
BPHL	0.01231113	0.01151045	0.01166118	0.01988584	0.02460802	0.02356319	0.02830977	0.03124146	0.02985802	1.91803153	1.31373978	3.41752E-05	0.001713995	0.01286627
CAP1	0.00394471	0.00543981	0.00467383	0.02694761	0.02111902	0.01986082	0.03167746	0.02894223	0.02866089	4.83182324	1.3143519	1.85469E-05	0.001281122	0.0405928
ATBA1	0.01964088	0.02388868	0.02216198	0.02734687	0.02725347	0.02647701	0.02903579	0.02880578	0.02764163	1.23421297	1.05434115	0.007236827	0.015373005	0.04556403
CDC42	0.00357514	0.00423811	0.00298927	0.02287457	0.02225693	0.01938744	0.02911726	0.02773261	0.02706821	6.52096587	1.35518259	1.14825E-05	0.001166303	0.01888602
GEPH	0.01686702	0.01825929	0.01563132	0.0251516	0.02572479	0.02475382	0.02773313	0.02703736	0.02769017	1.49002659	1.09031379	0.000182185	0.000512786	0.00322075
AL1L1	0.00386699	0.0045265	0.00405935	0.02199312	0.02225106	0.02070403	0.02666734	0.02451166	0.02465358	5.21553479	1.16758544	8.1717E-06	4.54673E-06	0.01269509
MCCA	0.00754991	0.00773756	0.00684053	0.01538589	0.01858176	0.01783958	0.02169002	0.02416035	0.02305881	2.34125296	1.33010748	3.41933E-05	0.000593973	0.00900032
PSA	0.00278861	0.0045749	0.00386156	0.02052644	0.02180231	0.02071636	0.02328854	0.02328906	0.02211482	5.61653021	1.08954116	7.89864E-08	1.21775E-05	0.02789901
VPS35	0.00660586	0.00924208	0.0066354	0.0191561	0.01679281	0.01569043	0.02240251	0.02148801	0.02054717	2.29678304	1.24784106	0.000167082	0.001945138	0.02089959
MARE3	0.00825634	0.0098741	0.00780636	0.01412594	0.01311436	0.01190494	0.01968583	0.01802876	0.01808396	1.50925444	1.4254243	0.000277523	0.00802602	0.00273081
NT5D3	0.00650945	0.0068194	0.00704661	0.00870677	0.01277717	0.0126864	0.01773708	0.01928923	0.01857577	1.67703318	1.6272034	1.58666E-05	0.027181923	0.00723602
FAS	0.00759176	0.01118655	0.00973761	0.01502655	0.0145792	0.01396007	0.01961282	0.01715882	0.01780106	1.52771189	1.25264935	0.002439652	0.009981552	0.01001111
CBR1	0.0038938	0.00456619	0.00520934	0.01267878	0.01336007	0.01274079	0.0196658	0.01686269	0.01707791	2.83698269	1.38233324	0.00016829	4.40469E-05	0.00594878
OTUB1	0.00137368	0.00286419	0.00187999	0.00803505	0.01171606	0.01143527	0.01996548	0.01671609	0.01663803	5.28986655	1.70970796	0.000167559	0.002461436	0.01022841
ODB2	0.00131377	0.00099023	0.00107858	0.01309127	0.01525568	0.01449577	0.01611889	0.01628928	0.0159407	12.6656955	1.12851997	4.49394E-08	3.3371E-05	0.0459658
TRAP1	0.00305221	0.00315172	0.00241069	0.01176853	0.01363384	0.01324707	0.01446892	0.01759354	0.01624652	4.48649525	1.24992702	0.000144255	8.27879E-05	0.03942348
NAKD2	0.00315636	0.00544574	0.00366491	0.01402145	0.01450972	0.01484646	0.01519446	0.01655254	0.01568847	3.53612167	1.09354675	0.000125892	0.000145864	0.04332687
MUTA	0.00405728	0.00354188	0.00292218	0.01329845	0.01103801	0.01091493	0.0137958	0.01575237	0.01478767	3.35046931	1.25770468	6.61926E-05	0.000508442	0.03424453
PRVA	0.0021621	0.00415713	0.00301924	0.01337265	0.01171056	0.01024009	0.01506605	0.01480974	0.01437546	1.78255811	1.25259703	4.4935E-05	0.001282079	0.03260913
RAB35	0.00569128	0.00773807	0.00596644	0.01121013	0.01158823	0.01034453	0.01549962	0.0140939	0.01437925	1.70876706	1.32676326	0.000445471	0.003448319	0.00308561
MTX1	0.00372424	0.00372882	0.00411762	0.01079596	0.011431	0.01158755	0.01458217	0.01386117	0.01391053	2.9224318	1.25253554	2.72163E-06	1.12346E-05	0.00105973
TIM44	0.0096982	0.00707391	0.00840596	0.01197315	0.0127838	0.01203234	0.01294349	0.01412693	0.01364932	1.46116391	1.10683707	0.003386792	0.008458996	0.03855545
NDRG3	0.00363032	0.00478804	0.00422345	0.00900857	0.01080919	0.01024169	0.01345247	0.01294851	0.01309054	2.37706822	1.31417414	1.66611E-05	0.000753104	0.00462101
NFS1	0.00516392	0.00542318	0.00486426	0.01204014	0.01236177	0.01228723	0.01261945	0.01300265	0.0126084	2.37449298	1.04201094	3.30217E-06	3.00074E-06	0.03381586
TCPH	0.00381051	0.00573851	0.00559265	0.00966008	0.00952264	0.00904968	0.01305712	0.01247186	0.01199723	1.86455047	1.32918944	0.000418221	0.00251602	0.00098054
GPDA	0.0042708	0.00477862	0.00458194	0.00801706	0.00887904	0.00938593	0.01180953	0.01166857	0.01133827	1.92805797	1.32472113	4.10408E-06	0.000584752	0.00255206
DPYL4	0.00357339	0.00502246	0.00364453	0.00762355	0.00651975	0.00591794	0.01171394	0.01083205	0.01020262	1.63893981	1.63243173	0.00044543	0.019182972	0.00312456
MFF	0.00082711	0.00097165	0.00223727	0.00801125	0.00927615	0.00720758	0.01096304	0.00963055	0.01002553	1.16548172	5.66875E-05	0.000390957	0.043879
HS105	0.00295132	0.00360677	0.00324176	0.00528579	0.00680387	0.00639671	0.01049329	0.00967044	0.00887215	1.8863922	1.57066397	0.000221536	0.004157442	0.00571061
GDS1	0.00167647	0.00327876	0.00208423	0.00712986	0.0081936	0.0071706	0.00908815	0.00926195	0.00900202	3.19542501	1.21597081	0.000154946	0.000969587	0.01045667
BCS1	0.0052857	0.00454544	0.00518518	0.00752173	0.00712006	0.00689238	0.00805777	0.00915016	0.00863868	1.43405012	1.2002605	0.000769052	0.001833284	0.01702628
IFAA1	0.00124296	0.00018239	0.00175013	0.00609114	0.00690333	0.00770915	0.0085368	0.00797942	0.0085908	4.29805193	1.21268468	1.45197E-05	0.000455021	0.04416027
NRCAM	0.00345624	0.00486199	0.00362583	0.00731859	0.00760494	0.00746298	0.00855844	0.00788811	0.00861772	1.87427098	1.11961473	0.000948816	0.001513021	0.02281287
ISCA2	0.00134417	0.00163148	0.00126001	0.00319906	0.00296053	0.00318433	0.00681139	0.00705625	0.00723099	2.20601223	2.25800732	4.50418E-06	0.00023675	1.0877E-05
EFGM	0.00263648	0.00270827	0.00215938	0.0046544	0.00493669	0.00490469	0.00603183	0.00731211	0.00684136	1.93170657	1.39249604	0.000507119	0.000275209	0.00785038
VWA8	0.0010623	0.00142225	0.00131354	0.00332509	0.00528322	0.00486862	0.0058111	0.00694279	0.00676083	3.54786915	1.44820304	0.000139425	0.0059595	0.04356987
BCAT1	0.00245402	0.00249275	0.00253874	0.00576109	0.00603234	0.00600656	0.00616933	0.00671595	0.00655069	2.37792426	1.09190896	1.6919E-05	2.78472E-06	0.04106423
SPRE	0.00064934	0.00091977	0.00043419	0.0030244	0.00436805	0.00402058	0.00528705	0.0052267	0.00487822	5.69836397	1.34809888	1.93348E-05	0.001823207	0.03505161
CAN2	0.00152656	0.00142657	0.00106165	0.001833	0.00235314	0.00212709	0.00326356	0.00282487	0.00257319	1.57249488	1.37198051	0.003264423	0.020646044	0.03587877

Fig. 3P - Proteins with significant progressive abundance increase in PPT1 KO lipofuscin with time

	PPT1 KO -2			PPT1 KO -4			PPT1 KO -7			Positive Fold-Change?		Unpaired t test		
										PPT1-4 vs PPT1-2 Fold Change	PPT1-7 vs PPT1-4 Fold Change	PPT1-2 vs PPT1-7 P-Value	PPT1-2 vs PPT1-4 P-value	PPT1-4 vs PPT1-7 P-value
QCR1	0.93570002	0.96338991	0.92721612	0.99387303	1.02596035	1.02323286	1.03203505	1.04496304	0.99388265	1.07672919	1.009107713	0.01234432	0.00853508	0.64311256
SAP	0.24880869	0.25276664	0.28226215	0.21791152	0.4350001	0.50324823	0.9975271	1.04623438	0.7146195	1.47499944	2.38581288	0.00318128	0.2254168	0.01652374
S2512	0.62787619	0.68939547	0.63935723	0.70597378	0.71422233	0.70981718	0.80698246	0.82144565	0.76403281	1.08861383	1.12321408	0.00473828	0.03854855	0.00735148
ATPO	0.33733932	0.38372397	0.36722561	0.41545179	0.45761555	0.42425804	0.59348798	0.60506693	0.52421689	1.19207813	1.32794118	0.00179779	0.02031564	0.0074511
MIC60	0.44316856	0.47022501	0.4706331	0.46690909	0.48802301	0.48449063	0.5743272	0.57236793	0.51519112	1.04002528	1.1545505	0.01240301	0.17425506	0.02228259
CATD	0.06174184	0.06360683	0.07204138	0.07571495	0.14719722	0.17616361	0.52851527	0.49015221	0.25682357	2.02176234	3.19611251	0.01336891	0.08866011	0.03148488
A0A0A6YW6	0.33509891	0.2986143	0.32952787	0.3328406	0.33084019	0.37851975	0.39406056	0.43343133	0.44727809	1.08197269	1.2231523	0.00605842	0.24367866	0.02537553
GPDM	0.31217756	0.33800335	0.31163751	0.32478431	0.31647466	0.34823671	0.43760999	0.4354761	0.38560216	1.02877597	1.27205027	0.00658867	0.51368916	0.00996868
GFAP	0.04836316	0.04891939	0.06175383	0.06747998	0.07476402	0.07721117	0.35793955	0.39209607	0.35580217	1.37990543	5.03901477	1.4823E-05	0.01864106	1.6776E-05
ECHA	0.1392954	0.14394208	0.13228164	0.17964143	0.203539	0.19115416	0.30522409	0.26557413	0.1937278	1.3822098	1.33115091	0.02388057	0.00233078	0.13011162
SFXN3	0.18367041	0.19780626	0.18629868	0.20968837	0.19087491	0.20184416	0.23233293	0.25163329	0.22509158	1.06081999	1.17723568	0.00645462	0.17305839	0.02073583
COX6C	0.16849635	0.13747686	0.1657709	0.19748015	0.22636813	0.21089303	0.23734993	0.24930164	0.19215755	1.34552006	1.0694264	0.02614736	0.01378672	0.48898587
ATPK	0.03128773	0.03810262	0.03927408	0.15973299	0.17774437	0.1600278	0.22339917	0.23165354	0.21641404	4.57836241	1.34966792	3.1588E-06	3.6303E-05	0.00143736
ATPA	0.16426163	0.17819839	0.16039462	0.16444472	0.19387643	0.17241976	0.23075733	0.20664317	0.21862485	1.05545593	1.23605575	0.00441516	0.41859134	0.02038826
SYPH	0.0255128	0.04095722	0.07979008	0.19166266	0.17760573	0.19383092	0.18455714	0.15968659	0.27970506	3.8499858	1.1080617	0.01638138	0.0012006	0.61201608
TPP1	0.04439452	0.05512912	0.0526029	0.04543027	0.07891715	0.09137374	0.2331831	0.2267239	0.12318514	1.41803763	2.70299002	0.01593872	0.20704588	0.03289007
ECHM	0.08656384	0.09056568	0.08581624	0.14760057	0.15294359	0.15249421	0.1911506	0.20019311	0.12927897	1.72293469	1.14918009	0.01836574	9.6054E-06	0.37049276
NFASC	0.08994817	0.08420455	0.09222882	0.16219966	0.14806534	0.15503233	0.14661936	0.14462866	0.21202887	1.74673258	1.08162429	0.02389088	0.00014992	0.60394161
NDUA2	0.09968328	0.08408636	0.08268258	0.12593794	0.13732748	0.12867006	0.17586914	0.16965054	0.14171172	1.47094099	1.24314185	0.00340226	0.00289735	0.04526246
LETM1	0.0917484	0.08124928	0.09452304	0.12312658	0.12444989	0.11893389	0.14706958	0.14269624	0.12403168	1.37025041	1.1288351	0.00390437	0.00163535	0.09575143
ASAH1	0.04619939	0.04456662	0.05112276	0.03085951	0.06577747	0.06177596	0.12255129	0.12939852	0.11913119	1.0459768	2.50032785	2.9301E-05	0.83307022	0.00171601
MIC19	0.07686965	0.07944673	0.08448277	0.08003366	0.07984128	0.08572583	0.12586639	0.13288085	0.10245429	1.02106164	1.46907063	0.0132679	0.59449956	0.01492885
CX7A2	0.01435298	0.01739573	0.01166167	0.07708688	0.07874163	0.08422387	0.07434822	0.06187235	0.12922119	5.52983698	1.10576598	0.0234522	1.7573E-05	0.70490444
ATIF1	0.04670515	0.0400442	0.05231349	0.05218694	0.05339317	0.05432363	0.06996353	0.06486392	0.07641559	1.1498668	1.32106387	0.00783127	0.12583508	0.00730932
ETFD	0.0316129	0.03335933	0.03396057	0.04481805	0.05181985	0.05010128	0.07198328	0.07598933	0.05326007	1.48322071	1.37136307	0.00837797	0.00199918	0.0679741
AOFB	0.00591331	0.00667879	0.00650998	0.01343264	0.01407786	0.01442868	0.06091439	0.06535158	0.05017678	2.18137918	4.3926064	0.00064188	2.2379E-05	0.00113392
GBG12	0.01336296	0.00958797	0.01210833	0.04809457	0.04402816	0.05179166	0.04955283	0.04348505	0.06991123	4.1048908	1.13226432	0.00615541	0.00013138	0.48722099
NDUA7	0.01046921	0.0109165	0.00731074	0.03265587	0.03724135	0.03326011	0.05607868	0.05338165	0.04066294	3.59477631	1.45528451	0.0011599	0.00017184	0.03443425
SEPT8	0.02341269	0.0196172	0.02424554	0.03069329	0.03148001	0.03741862	0.03597432	0.03266814	0.04974532	1.48036109	1.18872877	0.0347272	0.01354552	0.32917489
NB5R3	0.01124355	0.01039768	0.01126391	0.01810945	0.01845047	0.02012953	0.03682947	0.03432258	0.04043024	1.72281417	1.96830817	0.00012776	0.00032106	0.00062315
GNAQ	0.01229835	0.0106916	0.0119677	0.01443791	0.01163569	0.01489798	0.02596611	0.02705257	0.04684643	1.17203482	2.52602167	0.02152213	0.15101492	0.02971472
SCRB2	0.01912127	0.01736315	0.01951855	0.01639242	0.02137768	0.02174107	0.03137404	0.02850914	0.03445896	1.062643	1.58528463	0.0022627	0.56128669	0.00885117
AT8A1	0.01666571	0.01678391	0.0183608	0.02839068	0.02658302	0.02404202	0.02588227	0.02852575	0.02825607	1.52509341	1.0461726	0.00050789	0.0027347	0.46720506
SCAM1	0.00424651	0.00476149	0.00416121	0.00615897	0.00550874	0.00591058	0.02822212	0.02565414	0.02646979	1.33480187	4.57075536	8.7818E-06	0.0052797	1.1536E-05
STML2	0.01182311	0.01215329	0.01116843	0.0163832	0.01792451	0.01696936	0.02196934	0.02909012	0.0240393	1.45895405	1.46164429	0.00304809	0.00054899	0.0197887
NAC2	0.01814823	0.01634523	0.01660075	0.02697127	0.02119051	0.02350125	0.02282974	0.02421813	0.02845116	1.40256647	1.05352833	0.0102986	0.01779594	0.82005727
PXL2A	0.00695553	0.00483619	0.01076837	0.01533975	0.01571287	0.01309148	0.01662343	0.01902239	0.02865677	1.95673396	1.45665141	0.02673135	0.01996112	0.14903776
DCE1	0.01282344	0.01304874	0.01566136	0.01502703	0.01443011	0.0148526	0.01959332	0.02064506	0.02044889	1.06684234	1.36961453	0.00271948	0.37502672	0.00012064
CLUS	0.00268254	0.00235756	0.00322988	0.0093473	0.01080831	0.01016547	0.01548367	0.01876268	0.02665286	3.66640192	2.00847117	0.00618178	0.00011831	0.03801241
CTND2	0.0117562	0.01309863	0.01210297	0.01514678	0.01468804	0.01419905	0.01702049	0.01786621	0.02150471	1.19146341	1.28063718	0.01096074	0.00833577	0.04252138
PALS2	0.004639	0.00473237	0.00546864	0.00685135	0.00568938	0.00495183	0.01274272	0.0098567	0.01601172	1.16526497	2.23281781	0.01161044	0.21650764	0.01827039
NCAM2	0.00355944	0.00506991	0.00521055	0.0074527	0.00640073	0.00618365	0.00996851	0.00999191	0.01614936	1.44777748	1.80214764	0.02498098	0.0348564	0.06268691
SCPDL	0.00699047	0.00638743	0.00621051	0.00802811	0.00689002	0.00857106	0.01074654	0.01003732	0.01108632	1.19913702	1.35680236	0.00046045	0.07684376	0.00874128
FLOT2	0.00391141	0.00468377	0.00509329	0.00877344	0.0079884	0.00912238	0.00830816	0.01091801	0.00979078	1.89095041	1.12102861	0.00355477	0.0010839	0.27518654
FLOT1	0.00323838	0.00312744	0.00505513	0.00568164	0.00456559	0.00519113	0.0092066	0.00899645	0.00992988	1.36276916	1.80768379	0.00129529	0.12872749	0.00087746
MY18A	0.00226089	0.00167337	0.00248038	0.00529206	0.00501452	0.00549365	0.00684964	0.00815217	0.00974688	2.46302509	1.56628614	0.00218252	0.00035514	0.02465122
CBR4	0.00246431	0.00182497	0.00280105	0.00688753	0.00672744	0.00697511	0.00889131	0.00908097	0.00514359	2.90396803	1.12267005	0.01526537	0.00010813	0.54783118
ENDD1	0.00400988	0.00301241	0.00390399	0.00572126	0.00451154	0.00490746	0.00720075	0.00644351	0.01010488	1.38567395	1.56860933	0.0211065	0.04200623	0.07045045
MITOS	0.00372264	0.00367869	0.00358378	0.00382188	0.00328864	0.00403432	0.00735034	0.00937432	0.00553919	1.01419392	1.99768154	0.02751564	0.8291334	0.03047419
FARP1	0.00188805	0.00228771	0.00218336	0.00278448	0.00280874	0.00282469	0.00510354	0.00434362	0.00575248	1.32772132	1.80591637	0.00221146	0.00391644	0.00515209
AL3A2	0.00138949	0.0014889	0.00186196	0.00238577	0.00263454	0.00233831	0.00419757	0.00522912	0.00531777	1.55233667	2.00370004	0.0009994	0.00691342	0.00267829
TDRKH	0.00195125	0.00239081	0.0024451	0.00359842	0.00307971	0.00347683	0.0047011	0.00549911	0.00352062	1.49620279	1.351145	0.01783173	0.00711789	0.11671378
MYO6	0.00110978	0.00182585	0.00186387	0.00184547	0.00269549	0.0021144	0.00381561	0.00386602	0.00618351	1.38667876	2.08330418	0.02099408	0.15262122	0.0428289

Data Description: Fig. S7B - Quantification of immunoblots of CATD protein in total brain homogenates (A.U.), normalized to actin loading control (n = 5-6 biological replicates/genotype/timepoint). Fig. S7C - Bulk CATD enzyme activity (R.F.U.) in total brain fractions normalized to total protein (µg) determined by BCA (n = 4-5 biological replicates/genotype/age). Fig. S7D - Specific enzyme activity of CATD (R.F.U./A.U. total CATD protein) in total brain homogenates (n = 4-5 biological replicates/genotype/age).

Fig. S7B - Whole Brain Total CATD Western Blot Quantification Normalized to Beta-Actin

PPT1-2	PPT1-4	PPT1-7	WT-2	WT-12	WT-18	WT-24
0.0275	0.0619	0.126	0.0128	0.0083	0.0114	0.0022
0.0544	0.051	0.1523	0.0049	0.0082	0.0082	0.0227
0.0259	0.0478	0.158	0.0058	0.0134	0.0076	0.0081
0.0296	0.0433	0.1307	0.0055	0.0083	0.0092	0.0065
0.0512		0.1877	0.0173	0.0152	0.0201	0.0281
0.0332	0.0809	0.269	0.0208	0.0098	0.0186	0.0288

Two-way ANOVA	Ordinary
Alpha	0.05

Source of Variation	% of total variation	P value	P value summary	Significant?
Row Factor	4.073	0.0306	*	Yes
Column Factor	87.95	<0.0001	****	Yes

ANOVA table	SS (Type III)	DF	MS	F (DFn, DFd)	P value
Row Factor	0.00562	5	0.001124	F (5, 29) = 2.898	P=0.0306
Column Factor	0.1214	6	0.02023	F (6, 29) = 52.15	P<0.0001
Residual	0.01125	29	0.0003879		

Tukey's multiple comparisons test	Mean Diff.	95.00% CI of	Below threshold?	Summary	Adjusted P Value
PPT1-2 vs. PPT1-4	-0.02207	-0.06009 to 0	No	ns	0.5354
PPT1-2 vs. PPT1-7	-0.1337	-0.1696 to -0	Yes	****	<0.0001
PPT1-2 vs. WT-2	0.02578	-0.01019 to 0	No	ns	0.293
PPT1-2 vs. WT-12	0.02643	-0.009544 to	No	ns	0.2667
PPT1-2 vs. WT-18	0.02445	-0.01153 to 0	No	ns	0.3519
PPT1-2 vs. WT-24	0.0209	-0.01508 to 0	No	ns	0.5346
PPT1-4 vs. PPT1-7	-0.1116	-0.1496 to -0	Yes	****	<0.0001
PPT1-4 vs. WT-2	0.04785	0.009836 to 0	Yes	**	0.0068
PPT1-4 vs. WT-12	0.0485	0.01049 to 0	Yes	**	0.0059
PPT1-4 vs. WT-18	0.04652	0.008503 to 0	Yes	**	0.0091
PPT1-4 vs. WT-24	0.04297	0.004953 to 0	Yes	*	0.0189
PPT1-7 vs. WT-2	0.1594	0.1235 to 0.1	Yes	****	<0.0001
PPT1-7 vs. WT-12	0.1601	0.1241 to 0.1	Yes	****	<0.0001
PPT1-7 vs. WT-18	0.1581	0.1221 to 0.1	Yes	****	<0.0001
PPT1-7 vs. WT-24	0.1546	0.1186 to 0.1	Yes	****	<0.0001
WT-2 vs. WT-12	0.00065	-0.03533 to 0	No	ns	>0.9999
WT-2 vs. WT-18	-0.001333	-0.03731 to 0	No	ns	>0.9999
WT-2 vs. WT-24	-0.004883	-0.04086 to 0	No	ns	0.9994
WT-12 vs. WT-18	-0.001983	-0.03796 to 0	No	ns	>0.9999
WT-12 vs. WT-24	-0.005533	-0.04151 to 0	No	ns	0.9988
WT-18 vs. WT-24	-0.00355	-0.03953 to 0	No	ns	>0.9999

Fig. S7C PPT1 KO Total Brain CATD Activity

PPT1-2	PPT1-4	PPT1-7
180.881154	193.147438	446.519359
187.48945	132.509834	456.904541
180.857284	163.09418	459.939701
160.631089	115.236584	463.966829
183.618042	250.926974	316.780645
160.163995		629.958383

Ordinary One-Way ANOVA summary	
F	36.68
P value	<0.0001
P value summary	****
Significant diff. among means (P <	Yes
R squared	0.8397

ANOVA table	SS	DF	MS	F (DFn, DFd)	P value
Treatment (between columns)	323957	2	161978	F (2, 14) = 36.68	P<0.0001
Residual (within columns)	61828	14	4416		
Total	385785	16			

Tukey's multiple comparisons test	Mean Diff.	95.00% CI of diff.	Below threshold?	Summary	Adjusted P Value
PPT1-2 vs. PPT1-4	4.624	-100.7 to 109.	No	ns	0.9928
PPT1-2 vs. PPT1-7	-286.7	-387.2 to -18	Yes	****	<0.0001
PPT1-4 vs. PPT1-7	-291.4	-396.7 to -18	Yes	****	<0.0001

Fig. S7C WT Total Brain CATD Activity

WT-2	WT-12	WT-18	WT-24
101.259392	192.469581	152.282704	115.295303
87.8199688	187.703927	160.235592	175.113602
114.088743	205.007471	163.519995	198.782215
78.1690311	200.629482	145.930282	200.874963
125.841151	190.180693	192.788539	202.545348
120.059063	98.0190705	217.456918	179.53985

Ordinary One-Way ANOVA summary	
F	8.203
P value	0.0009
P value summary	***
Significant diff. among means (P <	Yes
R squared	0.5516

ANOVA table	SS	DF	MS	F (DFn, DFd)	P value
Treatment (between columns)	23538	3	7846	F (3, 20) = 8.203	P=0.0009
Residual (within columns)	19130	20	956.5		
Total	42668	23			

Tukey's multiple comparisons test	Mean Diff.	95.00% CI of diff.	Below threshold?	Summary	Adjusted P Value
WT-2 vs. WT-12	-74.46	-124.4 to -24.48	Yes	**	0.0025
WT-2 vs. WT-18	-67.5	-117.5 to -17.52	Yes	**	0.0059
WT-2 vs. WT-24	-74.15	-124.1 to -24.17	Yes	**	0.0026
WT-12 vs. WT-18	6.966	-43.01 to 56.94	No	ns	0.9793
WT-12 vs. WT-24	0.3098	-49.67 to 50.29	No	ns	>0.9999
WT-18 vs. WT-24	-6.656	-56.63 to 43.32	No	ns	0.9818

Fig. S7D PPT1 KO Total Brain CATD Activity

PPT1-2	PPT1-4	PPT1-7
6577.4965	3118.75039	3543.93028
3446.39941	2600.23582	2999.78097
6989.78187	3411.54373	2911.08934
5424.41861	2662.31193	3550.65935
3588.11807	3100.43055	1687.33596
4824.21672		2342.10881

Ordinary One-Way ANOVA summary	
F	9.747
P value	0.0022
P value summary	**
Significant diff. among means (P <	Yes
R squared	0.582

ANOVA table	SS	DF	MS	F (DFn, DFd)	P value
Treatment (between columns)	19518858	2	9759429	F (2, 14) = 9	P=0.0022
Residual (within columns)	14018091	14	1001292		
Total	33536949	16			

Tukey's multiple comparisons test	Mean Diff.	95.00% CI of	Below threshold?	Summary	Adjusted P Value
PPT1-2 vs. PPT1-4	2163	577.2 to 3748	Yes	**	0.0081
PPT1-2 vs. PPT1-7	2303	790.5 to 3815	Yes	**	0.0036
PPT1-4 vs. PPT1-7	139.5	-1446 to 1725	No	ns	0.9713

Fig. S7D WT Total Brain CATD Activity

WT-2	WT-12	WT-18	WT-24
7921.76583	23165.2426	13356.7826	53402.8125
17774.3113	22973.2969	19658.7875	7703.16804
19653.7162	15252.3681	21524.925	24470.5411
14191.2018	24293.0611	15893.3971	30802.4257
7280.06657	12502.7483	9582.50119	7203.76596
5783.27824	10011.0631	11707.8942	6244.86436

Ordinary One-Way ANOVA summary	
F	0.8902
P value	0.4632
P value summary	ns
Significant diff. among means (P <	No
R squared	0.1178

ANOVA table	SS	DF	MS	F (DFn, DFd)	P value
Treatment (between columns)	295752047	3	98584016	F (3, 20) = 0.8902	P=0.4632
Residual (within columns)	2214779388	20	110738969		
Total	2510531435	23			

Tukey's multiple comparisons test	Mean Diff.	95.00% CI of diff.	Below threshold?	Summary	Adjusted P Value
WT-2 vs. WT-12	-5932	-22937 to 11073	No	ns	0.7642
WT-2 vs. WT-18	-3187	-20192 to 13819	No	ns	0.9522
WT-2 vs. WT-24	-9537	-26542 to 7468	No	ns	0.4173
WT-12 vs. WT-18	2746	-14260 to 19751	No	ns	0.9685
WT-12 vs. WT-24	-3605	-20610 to 13400	No	ns	0.9329
WT-18 vs. WT-24	-6351	-23356 to 10655	No	ns	0.7255

Data Description: Fig. S7E - Bulk TPP1 enzyme activity (R.F.U.) in total brain fractions normalized to total protein (µg) determined by BCA (n = 4-5 biological replicates/genotype/age). Fig. S7G - Bulk GBA1 enzyme activity (R.F.U.) in total brain fractions normalized to total protein (µg) determined by BCA (n = 5-6 biological replicates/genotype/age).

Fig. S7E - Whole Brain PPT1 KO Total TPP1 Enzyme Activity

PPT1-2	PPT1-4	PPT1-7
396.425831	817.2763	726.0666
311.523681	620.1032	714.7356
438.506626	615.8832	827.6855
456.293549	709.219	1032.246
451.214723	702.7332	573.2136
436.923761		949.6794

Ordinary One-Way ANOVA summary	
F	18.25
P value	0.0001
P value summary	***
Significant diff. among means (P <	Yes
R squared	0.7228

ANOVA table	SS	DF	MS	F (DFn, DF	P value
Treatment (between columns)	478080	2	239040	F (2, 14) = 1	P=0.0001
Residual (within columns)	183349	14	13096		
Total	661429	16			

Tukey's multiple comparisons tes	Mean Diff.	95.00% CI	Below thres	Summary	Adjusted P Value
PPT1-2 vs. PPT1-4	-277.9	-459.3 to -9	Yes	**	0.0035
PPT1-2 vs. PPT1-7	-388.8	-561.7 to -2	Yes	***	0.0001
PPT1-4 vs. PPT1-7	-110.9	-292.3 to 70	No	ns	0.2779

Fig. S7E - Whole Brain WT Total TPP1 Enzyme Activity

WT-2	WT-12	WT-18	WT-24
178.091468	182.2779	234.4629	241.5964
138.007882	200.4927	213.0103	228.2832
131.113287	203.0839	206.5674	244.8709
141.904604	205.959	204.1246	239.6388
168.796477	217.5994	220.9545	285.3572
171.566952	204.6724	223.8278	263.0738

Ordinary One-Way ANOVA summary	
F	34.74
P value	<0.0001
P value summary	****
Significant diff. among means (P < 0	Yes
R squared	0.839

ANOVA table	SS	DF	MS	F (DFn, DF	P value
Treatment (between columns)	28350	3	9450	F (3, 20) = 3	P<0.0001
Residual (within columns)	5440	20	272		
Total	33790	23			

Tukey's multiple comparisons test	Mean Diff.	95.00% CI	Below thres	Summary	Adjusted P Value
WT-2 vs. WT-12	-47.43	-74.08 to -2	Yes	***	0.0004
WT-2 vs. WT-18	-62.24	-88.90 to -3	Yes	****	<0.0001
WT-2 vs. WT-24	-95.56	-122.2 to -6	Yes	****	<0.0001
WT-12 vs. WT-18	-14.81	-41.46 to 11	No	ns	0.4251
WT-12 vs. WT-24	-48.12	-74.77 to -2	Yes	***	0.0003
WT-18 vs. WT-24	-33.31	-59.96 to -6	Yes	*	0.0112

Fig. S7G - Whole Brain PPT1 KO Total GBA1 Enzyme Activity

PPT1-2	PPT1-4	PPT1-7
511.1904	577.575	627.2591
518.7893	343.3396	658.7413
412.7631	434.8393	481.1701
455.1981	437.5095	720.1011
522.6032	531.9176	512.866
512.5659	510.942	842.872

Ordinary One-Way ANOVA summary	
F	5.719
P value	0.0143
P value summary	*
Significant diff. among means (P <	Yes
R squared	0.4326

ANOVA table	SS	DF	MS	F (DFn, DF	P value
Treatment (between columns)	102841	2	51421	F (2, 15) = 5	P=0.0143
Residual (within columns)	134868	15	8991		
Total	237709	17			

Tukey's multiple comparisons tes	Mean Diff.	95.00% CI	Below thres	Summary	Adjusted P Value
PPT1-2 vs. PPT1-4	16.16	-126.0 to 15	No	ns	0.9532
PPT1-2 vs. PPT1-7	-151.6	-293.8 to -9	Yes	*	0.036
PPT1-4 vs. PPT1-7	-167.8	-310.0 to -2	Yes	*	0.0202

Fig. S7G - Whole Brain WT Total GBA1 Enzyme Activity

WT-2	WT-12	WT-18	WT-24
817.2561	655.0106	597.5552	634.943
684.9425	606.2828	632.7457	585.1212
618.2003	528.9351	521.8664	621.2462
790.7173	641.9645	593.6918	722.723
825.7828	604.6307	561.9968	687.8728
911.358	547.4524	689.0991	748.2542

Ordinary One-Way ANOVA summary	
F	7.911
P value	0.0011
P value summary	**
Significant diff. among means (P < 0	Yes
R squared	0.5427

ANOVA table	SS	DF	MS	F (DFn, DF	P value
Treatment (between columns)	124709	3	41570	F (3, 20) = 7	P=0.0011
Residual (within columns)	105091	20	5255		
Total	229800	23			

Tukey's multiple comparisons test	Mean Diff.	95.00% CI	Below thres	Summary	Adjusted P Value
WT-2 vs. WT-12	177.3	60.19 to 29	Yes	**	0.0021
WT-2 vs. WT-18	175.2	58.08 to 29	Yes	**	0.0024
WT-2 vs. WT-24	108	-9.123 to 22	No	ns	0.0773
WT-12 vs. WT-18	-2.113	-119.3 to 11	No	ns	>0.9999
WT-12 vs. WT-24	-69.31	-186.5 to 47	No	ns	0.3717
WT-18 vs. WT-24	-67.2	-184.3 to 49	No	ns	0.398

Data Description: Fig. S7F - Bulk CATD, TPP1, and PPT1 enzyme activity (R.F.U.) in lipofuscin fractions
(n = 3-5 biological replicates/genotype/age; n = 2 biological replicates for PPT1-4).

Fig. S7F - PPT1 KO Lipofuscin CATD Enzyme Activity

PPT1-2	PPT1-4	PPT1-7
252.442131		423.9795
183.107802	281.2855	459.9024
200.520926	353.3785	468.7829
		535.2538

Ordinary One-Way ANOVA summary	
F	30.54
P value	0.0007
P value summary	***
Significant diff. among means (P < 0	Yes
R squared	0.9106

ANOVA table	SS	DF	MS	F (DFn, DFd	P value
Treatment (between columns)	118755	2	59377	F (2, 6) = 30	P=0.0007
Residual (within columns)	11665	6	1944		
Total	130419	8			

Tukey's multiple comparisons test	Mean Diff.	95.00% CI o	Below thres	Summary	Adjusted P Value
PPT1-2 vs. PPT1-4	-105.3	-228.8 to 18	No	ns	0.088
PPT1-2 vs. PPT1-7	-260	-363.3 to -1	Yes	***	0.0006
PPT1-4 vs. PPT1-7	-154.6	-271.8 to -3	Yes	*	0.0158

Fig. S7F - WT Lipofuscin CATD Enzyme Activity

WT-12	WT-18	WT-24
72.5368693	45.29765	106.5252
96.6207715	87.99607	122.2429
114.969405	84.85468	88.6061
		153.1964
		263.46

Ordinary One-Way ANOVA summary	
F	2.175
P value	0.1761
P value summary	ns
Significant diff. among means (P < 0.0	No
R squared	0.3522

ANOVA table	SS	DF	MS	F (DFn, DFd	P value
Treatment (between columns)	11582	2	5791	F (2, 8) = 2.	P=0.1761
Residual (within columns)	21300	8	2663		
Total	32883	10			

Tukey's multiple comparisons test	Mean Diff.	95.00% CI o	Below thres	Summary	Adjusted P Value
WT-12 vs. WT-18	21.99	-98.39 to 14	No	ns	0.863
WT-12 vs. WT-24	-52.1	-159.8 to 55	No	ns	0.3937
WT-18 vs. WT-24	-74.09	-181.8 to 33	No	ns	0.1828

Fig. S7F - PPT1 KO Lipofuscin TPP1 Enzyme Activity

PPT1-2	PPT1-4	PPT1-7
661.7184		1859.079
648.6952	851.1944	1858.887
537.9821	986.7649	836.1517
		1105.022

Ordinary One-Way ANOVA summary	
F	4.018
P value	0.0781
P value summary	ns
Significant diff. among means (P < 0	No
R squared	0.5725

ANOVA table	SS	DF	MS	F (DFn, DFd	P value
Treatment (between columns)	1130116	2	565058	F (2, 6) = 4.	P=0.0781
Residual (within columns)	843829	6	140638		
Total	1973945	8			

Tukey's multiple comparisons test	Mean Diff.	95.00% CI o	Below thres	Summary	Adjusted P Value
PPT1-2 vs. PPT1-4	-302.8	-1353 to 74	No	ns	0.6687
PPT1-2 vs. PPT1-7	-798.7	-1677 to 80	No	ns	0.0708
PPT1-4 vs. PPT1-7	-495.8	-1492 to 50	No	ns	0.3446

Fig. S7F - WT Lipofuscin TPP1 Enzyme Activity

WT-12	WT-18	WT-24
250.1367	182.6094	226.2941
696.0146	238.893	286.2297
281.3255	251.816	263.2174
		282.1036
		320.1345

Ordinary One-Way ANOVA summary	
F	1.7
P value	0.2426
P value summary	ns
Significant diff. among means (P < 0.0	No
R squared	0.2982

ANOVA table	SS	DF	MS	F (DFn, DFd	P value
Treatment (between columns)	55812	2	27906	F (2, 8) = 1.	P=0.2426
Residual (within columns)	131347	8	16418		
Total	187159	10			

Tukey's multiple comparisons test	Mean Diff.	95.00% CI o	Below thres	Summary	Adjusted P Value
WT-12 vs. WT-18	184.7	-114.2 to 48	No	ns	0.241
WT-12 vs. WT-24	133.6	-133.8 to 40	No	ns	0.3729
WT-18 vs. WT-24	-51.16	-318.5 to 21	No	ns	0.851

Fig. S7F - PPT1 KO Lipofuscin PPT1 Enzyme Activity

PPT1-2	PPT1-4	PPT1-7
95.05259		103.4806
128.1755	60.10414	108.9971
85.63535	65.81455	107.6993
		189.1674

Ordinary One-Way ANOVA summary	
F	2.713
P value	0.1448
P value summary	ns
Significant diff. among means (P < 0	No
R squared	0.4749

ANOVA table	SS	DF	MS	F (DFn, DFd	P value
Treatment (between columns)	5543	2	2771	F (2, 6) = 2.	P=0.1448
Residual (within columns)	6129	6	1021		
Total	11672	8			

Tukey's multiple comparisons test	Mean Diff.	95.00% CI o	Below thres	Summary	Adjusted P Value
PPT1-2 vs. PPT1-4	40	-49.52 to 12	No	ns	0.4119
PPT1-2 vs. PPT1-7	-24.38	-99.28 to 50	No	ns	0.6041
PPT1-4 vs. PPT1-7	-64.38	-149.3 to 20	No	ns	0.1275

Fig. S7F - WT Lipofuscin PPT1 Enzyme Activity

WT-12	WT-18	WT-24
2282.879	1500.133	1530.724
9331.496	1288.798	1824.727
3159.717	1220.827	1639.992
		1710.958
		1675.564

Ordinary One-Way ANOVA summary	
F	3.389
P value	0.0859
P value summary	ns
Significant diff. among means (P < 0.0	No
R squared	0.4586

ANOVA table	SS	DF	MS	F (DFn, DFd	P value
Treatment (between columns)	25079558	2	12539779	F (2, 8) = 3.	P=0.0859
Residual (within columns)	29602409	8	3700301		
Total	54681966	10			

Tukey's multiple comparisons test	Mean Diff.	95.00% CI o	Below thres	Summary	Adjusted P Value
WT-12 vs. WT-18	3588	-899.9 to 80	No	ns	0.1159
WT-12 vs. WT-24	3248	-765.9 to 72	No	ns	0.1113
WT-18 vs. WT-24	-339.8	-4354 to 36	No	ns	0.9684

Data Description: Fig. S8 - ToF-SIMS spectra of purified lipofuscin from PPT1 KO 7-month and WT 12-month mice (average of n = 3 biological replicates) run using a 70 keV Gas Cluster Ion Beam (GCIB) in (FigS8A) negative ion mode and (Fig. S8B) positive ion mode with (H2O)20000 clusters. PPT1 KO values are negative for visualization purposes to compare peaks from each genotype as reflected spectra across the x-axis. Data points with an absolute value less than 0.001 were excluded to reduce file size. 40,000 rows of data - see excel

Fig. S8A - 70 keV H2O (20K) Negative Ion Mode		
m/z	WT-12	PPT1 KO-7

Fig. S8B - 70 keV H2O (20K) Positive Ion Mode		
m/z	WT-12	PPT1 KO-7

Data description: Fig. S9A - Data underlying pie-charts of total mol % by lipid class for lipofuscin and whole brain for PPT1 KO 7-month samples and WT 24-month samples. These data with statistical comparisons are also shown as bar graphs in Fig. S9B. Fig. S9B - Percent (%) contribution of lipid classes to total lipid content of lipofuscin and total brain from PPT1 7-month and WT 24-month mice. AHexCer: acyl-hexosylceramide; Cer: ceramide; CL: cardiolipin; DG: diglyceride (diacylglycerol); EtherDG: ether-linked diglyceride; EtherLPC: ether-linked lysophosphatidylcholine; EtherLPE: ether-linked lysophosphatidylethanolamine; EtherLPG: ether-linked lysophosphatidylglycerol; EtherPC: ether-linked phosphatidylcholine; EtherPE: ether-linked phosphatidylethanolamine; EtherPG: ether-linked phosphatidylglycerol; EtherPI: ether-linked phosphatidylinositol; HexCer: hexosylceramide; LPC: lysophosphatidylcholine; LPE: lysophosphatidylethanolamine; LPG: lysophosphatidylglycerol; LPI: lysophosphatidylinositol; OxPE: oxidized phosphatidylethanolamine; OxPI: oxidized phosphatidylinositol; PC: phosphatidylcholine; PE: phosphatidylethanolamine; PG/BMP: phosphatidylglycerol/bis(monoacylglycero)phosphate; PI: phosphatidylinositol; SHexCer: sulfatide; SM: sphingomyelin; TG: triglyceride (triacylglycerol). * p < 0.05, ** p < 0.01, *** p < 0.001 by one-way ANOVA with Tukey's multiple comparisons test.

Fig. S9A + Fig. S9B - Total Mol Percentage (%) by Lipid Class

Lipid Species	PPT1-7 Lipofuscin			WT-24 Lipofuscin			PPT1-7 Whole Brain			WT-24 Whole Brain		
AHexCer	0.00773957	0.00168387	0.017841	0.00930947	0.01028343	0.01632243	0.03054251	0.02608697	0.01788755	0.03209662	0.03662794	0.03582939
Cer	0.4962246	0.19095856	0.84308133	0.56616692	0.56953991	0.79497556	0.41579217	0.34018043	0.41453269	0.34973917	0.35596044	0.39543303
CL	5.95863343	8.52300751	3.50658996	5.2934742	6.14479562	6.28513497	1.79550534	2.44331171	1.74626283	1.84607956	1.76740646	2.07292635
DG	0.97890506	0.86704559	1.67554574	0.57147035	0.62968524	0.89974133	2.40505993	2.14377759	2.69571686	1.41089475	1.65154487	1.84426612
EtherDG	0.01675434	0.02071054	0.02824207	0.00953546	0.01050415	0.01122418	0.02373263	0.02363887	0.03527384	0.01870627	0.01849402	0.01881636
EtherLPC	0.00334851	0.00397983	0.00111353	0.0009977	0.00092678	0.0009124	0.00164879	0.00182994	0.00054183	0.00051268	0.00068533	0.00077052
EtherLPE	0.17685957	0.18557134	0.13687676	0.08835382	0.09069378	0.08803127	0.21439056	0.18940088	0.15651663	0.09456582	0.10630982	0.10369548
EtherLPG	0.00063929	0.00092091	0.0004897	0.00028339	0.0003944	0.00065167	0.00175326	0.00263409	0.00139233	0.00143051	0.00052711	0.00136501
EtherPC	0.83827255	0.85889142	0.99506433	1.01457559	0.90582227	0.86335645	0.60991316	0.7358117	0.70195728	0.606637	0.69871049	0.66938295
EtherPE	25.1601868	26.5608736	29.9521582	28.3734183	28.9598581	30.0619359	38.2257248	37.1726331	38.3479241	41.1962228	46.0831556	43.6196483
EtherPG	0.00011524	9.6672E-05	9.9598E-05	0.00020845	0.00020468	0.00019923	2.2055E-05	0.00001511	3.1037E-05	2.1122E-05	4.8728E-05	0.0000484
EtherPI	0.10514145	0.10040637	0.06935042	0.04460976	0.04107638	0.04824756	0.03590138	0.0389922	0.03883714	0.02541449	0.02941292	0.02602654
HexCer	0.84814998	0.67749922	1.41807316	0.79591482	0.87947499	1.25587201	3.26807476	2.97432652	2.46942088	2.58393367	2.60105618	2.77908685
LPC	2.28040225	2.25133331	1.69015455	1.22597633	1.31708885	1.21564187	1.49206897	1.3447966	1.47143922	0.66678668	0.86441036	0.85062591
LPE	2.83930791	2.75930975	1.90305666	1.48060148	1.52094414	1.54284839	1.56783905	1.35821573	1.41900422	0.70780149	0.65724102	0.71258134
LPG	0.10458097	0.13618945	0.17504157	0.04937133	0.06048643	0.05475615	0.11370497	0.09697683	0.14727684	0.02693674	0.02762396	0.03018509
LPI	0.30931182	0.28296104	0.16925093	0.16424095	0.1500386	0.15897298	0.22761251	0.19057537	0.12872133	0.05857594	0.06636451	0.08371113
OxPE	1.68822433	1.73536713	2.15379128	0.97417629	1.06848982	0.74043311	0.81984963	0.7169223	1.06662824	0.24985772	0.34386071	0.28334638
OxPI	0.03925914	0.04047855	0.12396139	0.00879071	0.00881881	0.0083378	0.06132209	0.04774088	0.08155148	0.00559249	0.00597688	0.00625256
PC	24.6566988	20.1531773	23.0850561	24.049726	22.4595925	23.1515721	22.484466	22.9813439	21.8190223	21.6804841	18.0143578	19.1157713
PE	19.0879877	20.746776	18.2384028	21.4168198	21.846755	21.3281266	19.6562987	20.5021972	20.1388123	22.8818667	19.7434781	21.0970942
PG/BMP	3.49586484	3.68660149	2.15041477	1.39819389	1.53016078	1.35732357	1.0300327	1.03517168	0.93135095	0.38931784	0.466395	0.45096353
PI	10.340823	9.75501732	11.0616061	11.9638942	11.3195715	9.50269918	4.56807682	4.80044622	5.42135168	4.39505473	5.79812272	5.08578471
SHexCer	0.1531665	0.08413062	0.18969257	0.092752	0.10261321	0.19087464	0.45262058	0.38518914	0.31080348	0.45392596	0.35835618	0.38809866
SM	0.00178562	0.00175455	0.00246936	0.00162124	0.00124479	0.00148755	0.00218493	0.00183181	0.00227123	0.0011685	0.00106329	0.00096496
TG	0.41161673	0.37525801	0.41257606	0.40551758	0.37093578	0.42032109	0.49586164	0.4459533	0.43547174	0.31637663	0.30280948	0.32732496

Ordinary one-way ANOVA	AHexCer	Cer	CL	DG	EtherDG	EtherLPC	EtherLPE	EtherLPG	EtherPC	EtherPE	EtherPG	EtherPI	HexCer	LPC	LPE	LPG	LPI	OxPE	OxPI	PC	PE	PG/BMP	PI	SHexCer	SM	TG
F	13.34	1.537	9.509	18.5	7.721	3.975	17.72	6.837	12.01	53.61	186	24.48	33.97	25.51	23.33	16.9	8.41	39.17	5.178	3.208	2.809	22.31	46.7	19.9	10.67	18.29
P value	0.0018	0.2783	0.0051	0.0006	0.0095	0.0526	0.0007	0.0134	0.0025	<0.0001	<0.0001	0.0002	<0.0001	0.0002	0.0003	0.0008	0.0074	<0.0001	0.028	0.0832	0.1079	0.0003	<0.0001	0.0005	0.0036	0.0006
P value summary	**	ns	**	***	**	ns	***	*	**	****	****	***	****	***	***	***	**	****	*	ns	ns	***	****	***	**	***
Significant diff. among means (P < 0.05)?	Yes	No	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes
R squared	0.8334	0.3656	0.781	0.874	0.7433	0.5985	0.8692	0.7194	0.8183	0.9526	0.9859	0.9018	0.9272	0.9054	0.8974	0.8637	0.7592	0.9363	0.66	0.5461	0.513	0.8932	0.946	0.8818	0.8	0.8727

Tukey's multiple comparisons test - Adjusted p values	AHexCer	Cer	CL	DG	EtherDG	EtherLPC	EtherLPE	EtherLPG	EtherPC	EtherPE	EtherPG	EtherPI	HexCer	LPC	LPE	LPG	LPI	OxPE	OxPI	PC	PE	PG/BMP	PI	SHexCer	SM	TG
PPT1-7 Lipofuscin vs. WT-24 Lipofuscin	0.9215	0.7951	0.9998	0.2738	0.0536	0.095	0.0059	0.9013	0.949	0.5954	<0.0001	0.0019	>0.9999	0.0025	0.0082	0.007	0.1184	0.001	0.0857	0.9653	0.1257	0.0054	0.8514	0.9909	0.112	>0.9999
PPT1-7 Lipofuscin vs. PPT1-7 Whole Brain	0.0374	0.8404	0.0227	0.0038	0.4544	0.2118	0.6088	0.0317	0.0237	0.0004	<0.0001	0.0008	0.0003	0.0113	0.0056	0.7139	0.2893	0.0006	0.9966	0.9984	0.8203	0.0013	0.0002	0.004	0.9693	0.0632
WT-24 Lipofuscin vs. WT-24 Whole Brain	0.0049	0.2974	0.0224	0.0192	0.1855	0.9724	0.8633	0.3057	0.0068	<0.0001	<0.0001	0.2108	0.0008	0.0586	0.0222	0.4892	0.1591	0.0107	0.9992	0.0835	0.9855	0.079	0.0001	0.0019	0.3244	0.0116
PPT1-7 Whole Brain vs. WT-24 Whole Brain	0.212	0.9984	0.9997	0.0471	0.1466	0.7506	0.0033	0.1715	0.9729	0.0202	0.279	0.563	0.7625	0.0109	0.0339	0.0042	0.0629	0.0183	0.0957	0.1981	0.5662	0.4143	0.9947	0.9818	0.0052	0.0004

Data description: Fig.4A-B - Time-of-Flight Secondary Ion Mass Spectrometry (ToF-SIMS) of PPT1 KO 7-month mouse brain section subjected to K-means clustering analysis. 9,000+ rows of data - see excel. Fig. 4C - putative peak assignments for oxidized phosphatidylethanolamine (OxPE) metabolites detected by lipidomics analysis (blue) with mass-tolerance of 0.02 Da

Fig. 4A-B - ToF SIMS K-means Clustering

m/z	Cluster 1	Cluster 2	Cluster 3	Cluster 4
23.2155068	1.95E-05	2.51E-05	2.41E-05	2.55E-05
23.2225898	5.30E-06	4.54E-06	4.99E-06	6.50E-06
23.2473891	3.97E-05	4.42E-05	4.71E-05	4.16E-05
23.2828396	6.61E-05	5.19E-05	6.57E-05	6.32E-05
23.3147681	1.90E-05	2.74E-05	3.10E-05	2.68E-05
23.3372495	5.10E-06	1.15E-05	1.11E-05	1.04E-05
23.3585576	2.87E-05	3.07E-05	3.75E-05	3.60E-05
23.3786908	1.76E-05	1.51E-05	1.54E-05	1.80E-05
23.4083143	3.28E-05	4.87E-05	5.63E-05	6.44E-05

Fig. 4C Highlighted OxPE Peaks

Mass Difference Absolute Value (Accounting for +2 Negative Mode)	Original ToF-SIMS Mass (Positive Mode)	Original Lipidomics Mass (Negative Mode)	Lipid Annotation
0.014306167	768.5159562	766.50165	PE 37:5;O|PE 22:5_15:0;O
0.014497758	770.5343978	768.5199	PE 37:4;O|PE 17:0_20:4;O
0.020294935	796.5171249	794.49683	PE 38:6;O2|PE 16:0_22:6;O2
0.018906468	798.5304465	796.51154	PE 38:5;O2|PE 20:5_18:0;O2
0.010507568	800.5393776	798.52887	PE 38:4;O2|PE 18:0_20:4;O2
0.003491296	814.5047487	812.50824	PE 38:5;O3|PE 18:1_20:4;O3
0.011628343	822.5020417	820.51367	PE 40:7;O2|PE 18:1_22:6;O2
0.011550223	834.5606202	832.54907	PE 42:7;O|PE 20:4_22:3;O
0.005882662	856.5087073	854.51459	PE 40:6;O4|PE 18:0_22:6;O4

Data Description: Fig. 4D - Unbiased lipidomics fold-change comparisons between lipofuscin and whole brain lipid mol percent (%) by unsaturation for PPT1 KO 7-month (blue) and WT 24-month (orange) samples. * p < 0.05, ** p < 0.01, *** p < 0.001 by unpaired two-tailed t-test of lipofuscin vs. whole brain for each genotype. Fig. 4E - Fold-change comparisons between lipofuscin and whole brain lipid mol percent (%) by chain length for PPT1 KO 7-month (blue) and WT 24-month (orange) samples. ND = Not Determined. * p < 0.05, ** p < 0.01, *** p < 0.001 by unpaired two-tailed t-test of lipofuscin vs. whole brain for each genotype.

Mol Percent (%) by Chain Length													
Chain Length	Saturation	PPT1-7 Lipofuscin			WT-24 Lipofuscin			PPT1-7 Whole Brain			WT-24 Whole Brain		
4	0	0.002222	0.002182	0.001029	0.000362	0.000392	0.000292	0.000584	0.000561	0.000578	2.17E-05	6.88E-05	6.95E-05
6	0	0.001334	0.001629	0.001172	0.000972	0.001212	0.000668	0.000419	0.000472	0.00045	0.000197	0.00025	0.000221
14	0	0.02577	0.022153	0.023229	0.014414	0.014506	0.015451	0.039032	0.036355	0.037838	0.030382	0.031196	0.02957
15	0	0.008195	0.007716	0.006564	0.006461	0.00673	0.003023	0.002738	0.003476	0.003012	0.001349	0.00268	0.001437
16	0	15.33602	12.79137	15.24527	15.16149	14.10236	14.19753	13.05588	13.17441	12.74903	11.83509	10.49048	11.01418
17	0	0.08461	0.083493	0.086665	0.064028	0.066952	0.067727	0.069794	0.072024	0.075519	0.052672	0.063796	0.059538
18	0	14.88402	14.79043	15.86285	15.48816	14.95875	14.8292	14.00802	14.22826	14.4021	14.02829	12.87793	13.23477
19	0	0.018597	0.017075	0.022531	0.018562	0.018832	0.017939	0.032132	0.031892	0.031737	0.016158	0.020067	0.021016
20	0	0.06148	0.055612	0.163007	0.072019	0.08023	0.086726	0.258492	0.233743	0.265966	0.163959	0.290575	0.24599
21	0	0.013851	0.013675	0.028277	0.016626	0.01767	0.01842	0.035709	0.031192	0.035285	0.022892	0.03025	0.03047
22	0	0.037871	0.01936	0.064144	0.026685	0.027721	0.045317	0.106618	0.087211	0.088537	0.071322	0.072862	0.077656
23	0	0.097578	0.062363	0.168977	0.075718	0.082775	0.115502	0.269172	0.228405	0.183045	0.186222	0.202821	0.227424
24	0	0.186223	0.124955	0.348204	0.129174	0.137025	0.194781	0.664211	0.582451	0.491467	0.372605	0.462105	0.457295
25	0	0.003588	0.002507	0.010311	0.002488	0.002695	0.003402	0.015319	0.01228	0.014087	0.0076	0.012244	0.010454
26	0	0.001433	0.000863	0.004657	0.000715	0.000704	0.001258	0.011309	0.00961	0.008309	0.002922	0.005043	0.005304
14	1	0.000257	0.000234	0.000277	0.000282	0.000209	0.00018	0.000102	2.91E-05	5.52E-05	5.1E-05	2.22E-05	1.88E-05
16	1	4.973419	5.149145	4.040063	4.391656	4.607249	4.756219	4.36171	4.438955	4.375732	4.696948	4.479618	4.391381
17	1	0.046707	0.052474	0.069852	0.053115	0.055725	0.055221	0.099602	0.091004	0.098134	0.094344	0.127843	0.110734
18	1	26.68506	27.95485	28.8373	26.78439	27.1444	27.05782	32.22826	31.50944	32.26554	29.76019	30.68059	30.92418
19	1	0.017843	0.018582	0.030764	0.023892	0.026154	0.025532	0.055413	0.053826	0.056861	0.07079	0.091287	0.08132
20	1	0.794084	0.897091	1.966356	1.328222	1.464389	1.405377	3.557487	3.278144	3.663975	3.439468	4.726399	4.122197
21	1	0.009905	0.010333	0.030265	0.021123	0.02314	0.022654	0.050943	0.044782	0.051217	0.053298	0.090949	0.072074
22	1	0.045744	0.039615	0.12739	0.05125	0.054951	0.060731	0.212587	0.185683	0.205308	0.143142	0.237069	0.19615
23	1	0.019834	0.015259	0.03976	0.030231	0.031951	0.043385	0.064789	0.057946	0.055598	0.069839	0.087743	0.085676
24	1	0.204617	0.183409	0.390386	0.216584	0.238364	0.301561	0.854371	0.755479	0.757608	0.746722	0.754686	0.788352
25	1	0.003279	0.001927	0.005857	0.003601	0.005172	0.004475	0.007702	0.006455	0.00814	0.008631	0.014231	0.011364
26	1	0.003238	0.003135	0.006936	0.003203	0.003674	0.004652	0.017757	0.015442	0.015194	0.011097	0.013476	0.013826
26	1	0.000163	0.000128	0.000264	4.91E-05	5.15E-05	5.04E-05	0.000351	0.000259	0.000284	0.000197	0.000185	0.000163
16	2	0.006371	0.005994	0.005795	0.01358	0.008742	0.008928	0.002273	0.002741	0.003111	0.006405	0.003666	0.004239
17	2	0.00115	0.000918	0.00082	0.001796	0.001751	0.001325	0.001196	0.001172	0.000968	0.001767	0.001731	0.001649
18	2	4.980211	5.584869	5.189917	5.188282	5.585468	5.938852	7.623159	7.338324	7.176056	9.247114	9.648762	9.344719
20	2	0.076312	0.084487	0.157956	0.115779	0.122221	0.114618	0.242244	0.222167	0.263183	0.246897	0.359293	0.301413
21	2	0.000788	0.000823	0.001008	0.000307	0.000325	0.000274	0.000695	0.000595	0.001098	0.000569	0.000593	0.0006
22	2	0.00716	0.007675	0.027128	0.011428	0.012732	0.011145	0.037168	0.029739	0.040612	0.026874	0.066156	0.046453
24	2	0.011618	0.010985	0.018816	0.0167	0.016286	0.018318	0.029851	0.026867	0.027173	0.0277	0.032869	0.03342
26	2	0.00063	0.000526	0.000907	0.000667	0.000593	0.000928	0.00152	0.001441	0.001235	0.00093	0.000953	0.0013
29	2	1.43E-05	2.67E-05	0.000108	1.78E-07	3.02E-07	1.74E-07	6.71E-06	6.36E-06	5.37E-05	4.82E-07	3.48E-07	2.75E-07
34	2	2.38E-06	0	1.58E-05	0	1.38E-05	4.74E-06	2.21E-05	2E-06	3.51E-05	2.47E-05	1.23E-05	1.82E-05
16	3	0.002166	0.001857	0.000846	0.000175	0.000161	0.000147	0.000499	0.000662	0.000287	0.000117	0.000106	8.84E-05
18	3	0.042977	0.039233	0.034151	0.040512	0.038434	0.038369	0.052251	0.044553	0.045638	0.040871	0.034071	0.039029
20	3	1.209846	1.302829	0.996338	1.085979	1.126979	1.087767	0.755798	0.794346	0.804292	0.689633	0.728355	0.741601
21	3	0.034208	0.03855	0.030118	0.021543	0.021972	0.024908	0.048713	0.049474	0.044522	0.038595	0.029395	0.035313
22	3	0.010358	0.012383	0.018028	0.018377	0.017889	0.01533	0.020141	0.0195	0.021464	0.018448	0.026046	0.021646
19	4	8.28E-05	7.24E-05	0.000251	3.28E-05	3.16E-05	1.26E-05	6.65E-05	3.74E-05	0.000184	8.8E-07	1.52E-05	2.97E-06
20	4	14.6553	15.10114	12.6888	13.03767	13.0739	13.38948	10.16469	10.79113	10.62286	10.46455	10.34489	10.60522
22	4	2.142177	2.344291	2.62218	2.71883	2.522853	2.479556	2.4952	2.545992	2.675282	2.712686	3.050181	2.927388
24	4	0.045576	0.048678	0.060533	0.06637	0.058778	0.05046	0.038289	0.036013	0.045009	0.034966	0.046704	0.039246
20	5	0.2263	0.221212	0.163506	0.133322	0.148995	0.153484	0.090005	0.083158	0.090124	0.051801	0.051917	0.05377
22	5	0.3629	0.372913	0.343278	0.371121	0.413876	0.333354	0.21792	0.235622	0.235902	0.237398	0.329517	0.191303
24	5	0.033744	0.026259	0.061408	0.040876	0.035405	0.030364	0.057622	0.053349	0.048753	0.037279	0.068547	0.054086
22	6	12.50325	12.39301	9.915724	13.01392	13.50329	12.87098	7.987907	8.50047	7.854112	10.17163	9.229434	9.275436
24	6	0.080225	0.080148	0.080262	0.117392	0.115506	0.096608	0.053125	0.054152	0.058127	0.058057	0.080578	0.069903

Fig. 4D - Total Mol Percent (%) by Unsaturation												
Saturation	PPT1-7 Lipofuscin			WT-24 Lipofuscin			PPT1-7 Whole Brain			WT-24 Whole Brain		
0	30.7627857	27.9953774	32.03688573	31.0778753	29.5185569	29.5972395	28.569435	28.7323458	28.3869693	26.7916867	24.5623674	25.4153972
1	32.8041543	34.3261792	35.54546604	32.9076014	33.655424	33.7378629	41.5110738	40.4374468	41.5536491	39.0947106	41.3040996	40.7974323
2	5.08425653	5.69630402	5.402469312	5.34853948	5.74813153	6.09439245	7.93813585	7.62305283	7.51352445	9.55828106	10.1140346	9.73381199
3	1.29955602	1.39485284	1.079480704	1.16658584	1.20543587	1.16652093	0.87740235	0.90853599	0.91620306	0.7876627	0.81797321	0.83767725
4	16.8431363	17.4941839	15.37176137	15.822902	15.655567	15.9195079	12.6982483	13.3731708	13.3433299	13.2121994	13.4417933	13.5718568
5	0.62294309	0.62038436	0.568192102	0.54531934	0.59827699	0.51720211	0.36554657	0.37212911	0.37477908	0.32647835	0.44998102	0.29915886
6	12.5834775	12.4731532	9.995985537	13.1313129	13.6187959	12.9675846	8.04103255	8.55462164	7.91223912	10.2296877	9.31001173	9.34533892

Saturation	PPT1-7 Lipofuscin/Whole Brain			p-value
0	1.07677263	0.97435057	1.128577179	0.22812931
1	0.79025068	0.84887108	0.855411421	0.00135454
2	0.64048495	0.74724709	0.719032639	0.00045697
3	1.48114034	1.53527527	1.178211194	0.01918533
4	1.32641415	1.30815527	1.152018388	0.00670667
5	1.70414151	1.6671213	1.516072074	0.00020759
6	1.56490817	1.45806018	1.263357361	0.01543538

Saturation	log10(PPT1-7 Lipofuscin/Whole Brain)		
0	0.03212401	-0.0112848	0.052531264
1	-0.1022351	-0.0711583	-0.067824956
2	-0.1934911	-0.1265358	-0.143251395
3	0.17059621	0.18618626	0.071223145
4	0.12267915	0.1166593	0.061459411
5	0.23150566	0.2219672	0.180719848
6	0.19448886	0.16377545	0.101526215

Saturation	WT-24 Lipofuscin/Whole Brain			p-value
0	1.15998204	1.2017798	1.16453972	0.00557805
1	0.8417405	0.81482043	0.82696045	0.00063384
2	0.55957127	0.5683322	0.62610542	0.00011403
3	1.48107284	1.47368626	1.39256609	4.7751E-05
4	1.19759788	1.16469333	1.17297936	5.2039E-05
5	1.67030783	1.32956049	1.7288544	0.02008904
6	1.28364749	1.4628119	1.38759918	0.00054851

Saturation	log10(WT-24 Lipofuscin/Whole Brain		
0	0.06445126	0.0798249	0.06615431
1	-0.0748218	-0.0889381	-0.0825153
2	-0.2521446	-0.2453977	-0.2033525
3	0.17057642	0.16840503	0.14381582
4	0.07831102	0.06621159	0.06929037
5	0.22279652	0.1237081	0.23775842
6	0.10844577	0.16518848	0.14226404

Fig. 4E Total Mol % by Chain Length		
Fatty Acyl Chain	KO Lipo/WB log10FC	p-value KO Lipo/WB
14-1	0.61528415	0.00140376
16-3	0.52647356	0.0508642
15-0	0.3867212	0.00113247
20-5	0.36562515	0.00462579
16-2	0.34931348	0.00034659
29-2 / ND	0.34821752	0.45671902
22-5	0.19455917	0.00024933
20-3	0.17329817	0.01384373
24-6	0.16281087	8.0234E-05
22-6	0.15536377	0.01582058
19-4	0.15001005	0.61706324
20-4	0.12843505	0.00904417
24-4	0.11305336	0.08938882
17-0	0.06901087	0.00282317
16-0	0.04638166	0.15738853
21-2	0.04011746	0.67068825
16-1	0.03134712	0.39459155
18-0	0.02856641	0.05558777
22-4	-0.0356318	0.24578375
18-1	-0.060718	0.00340263
17-2	-0.0625829	0.28742318
18-3	-0.0878324	0.06850805
24-5	-0.119116	0.30988454
21-3	-0.1421343	0.00996011
18-2	-0.147711	0.00064222
22-3	-0.1757443	0.04571999
14-0	-0.2017553	0.00044778
26-1 / ND	-0.2069133	0.08385009
19-0	-0.2162436	0.00154416
17-1	-0.2325333	0.00584983
21-0	-0.2627291	0.03756118
25-1	-0.30441	0.04090773
24-2	-0.306515	0.00619417
26-2	-0.3085468	0.00740686
23-0	-0.3158195	0.04286681
20-2	-0.3584322	0.00879952
22-0	-0.3666825	0.02045686
23-1	-0.3770192	0.01258657
19-1	-0.3930676	0.00152821
25-0	-0.4049928	0.03148501
22-2	-0.4086185	0.04041511
24-0	-0.4209446	0.01243477
20-0	-0.4324733	0.01166447
22-1	-0.4528634	0.0114265
20-1	-0.4579851	0.00434633
21-1	-0.4638276	0.01027635
24-1	-0.4830728	0.00195423
34-2 / ND	-0.5128141	0.27470439
26-1	-0.5606224	0.00143384
26-0	-0.6236554	0.00715563

Fig. 4E Total Mol % by Chain Length		
Fatty Acyl Chain	WT Lipo/WB log10FC	p-value WT Lipo/WB
14-1	0.86238006	0.00391424
19-4	0.60614472	0.07104359
15-0	0.47217923	0.04762456
20-5	0.44204133	0.00011217
16-2	0.33920143	0.03431105
24-6	0.1986777	0.01225671
16-3	0.19067674	0.00800402
20-3	0.18423841	5.0081E-05
22-5	0.16878438	0.06236305
24-4	0.16205958	0.03354033
22-6	0.13783985	0.00058979
16-0	0.11514103	0.00285317
20-4	0.09947632	3.6793E-05
17-0	0.0526855	0.09206371
18-0	0.05228113	0.01234009
18-3	0.01256114	0.6312754
16-1	0.0059504	0.67770465
19-0	-0.0147301	0.6951076
17-2	-0.0237703	0.58548562
22-4	-0.0513455	0.05851243
18-1	-0.0523664	0.00073379
22-3	-0.1078474	0.11315061
26-2	-0.1628093	0.10203086
24-5	-0.1759413	0.13593068
21-3	-0.1789094	0.01586351
21-0	-0.2003222	0.01549638
29-2 / ND	-0.227487	0.11125598
18-2	-0.2278298	0.00010167
24-2	-0.2629232	0.00178478
21-2	-0.2887276	8.4126E-05
17-1	-0.3073371	0.00439386
14-0	-0.3126492	1.0962E-05
22-0	-0.3472419	0.00302306
23-0	-0.3521672	0.00263419
23-1	-0.3625397	0.00280035
20-2	-0.4105916	0.00472452
25-1	-0.412202	0.01409977
24-0	-0.4475825	0.00148264
20-1	-0.4664423	0.00195791
20-0	-0.4670712	0.01458774
34-2 / ND	-0.4738425	0.08648254
24-1	-0.4809754	5.6826E-05
19-1	-0.5079171	0.00071618
21-1	-0.5095569	0.01022348
26-1	-0.5225662	0.00072812
22-1	-0.5381532	0.00752296
25-0	-0.5476748	0.00632449
26-1 / ND	-0.5575644	0.00018078
22-2	-0.5966921	0.03767593
26-0	-0.6951065	0.01042686

Data Description: Fig. 4F/Fig. S10C - Fold-change comparison between PPT1 KO 7-month lipofuscin and total brain lipid metabolites (n = 3 biological replicates/genotype). AHexCer: acyl-hexosylceramide; Cer: ceramide; CL: cardiolipin; DG: diglyceride (diacylglycerol); EtherDG: ether-linked diglyceride; EtherLPC: ether-linked lysophosphatidylcholine; EtherLPE: ether-linked lysophosphatidylethanolamine; EtherLPG: ether-linked lysophosphatidylglycerol; EtherPC: ether-linked phosphatidylcholine; EtherPE: ether-linked phosphatidylethanolamine; EtherPG: ether-linked phosphatidylglycerol; EtherPI: ether-linked phosphatidylinositol; HexCer: hexosylceramide; LPC: lysophosphatidylcholine; LPE: lysophosphatidylethanolamine; LPG: lysophosphatidylglycerol; LPI: lysophosphatidylinositol; OxPE: oxidized phosphatidylethanolamine; OxPI: oxidized phosphatidylinositol; PC: phosphatidylcholine; PE: phosphatidylethanolamine; PG/BMP: phosphatidylglycerol/bis(monoacylglycero)phosphate; PI:

Fig. 4G/Fig. S10C - PPT1 KO Lipid Metabolite Fold Change - Lipofuscin/Whole Brain		
Lipid Annotation	**$\log_{10}$(PPT1 KO Lipo/WB)**	**$-\log_{10}$(p-value)**
AHexCer 52:1;O2|AHexCer (O-16:0)18:1;O2/18:0	-0.4753687	1.14991937
AHexCer 54:1;O2|AHexCer (O-18:0)18:1;O2/18:0	-0.4773427	1.01420109
AHexCer 56:2;O2|AHexCer (O-17:1)18:1;O2/21:0	-0.3463418	0.8865373
AHexCer 57:1;O2|AHexCer (O-16:0)18:1;O2/23:0	-0.2826971	0.63654168
AHexCer 58:1;O2|AHexCer (O-16:0)18:1;O2/24:0	-0.3128481	0.7312685
AHexCer 58:2;O2|AHexCer (O-16:0)18:1;O2/24:1	-0.5225471	1.44253545
AHexCer 58:2;O2|AHexCer (O-16:0)18:1;O2/24:1	-0.4536166	1.46343428
AHexCer 59:1;O2|AHexCer (O-18:0)18:1;O2/23:0	-0.1804758	0.37754734
AHexCer 59:2;O2|AHexCer (O-18:0)18:1;O2/23:1	-0.3376354	0.84102591
AHexCer 60:3;O2|AHexCer (O-18:1)18:1;O2/24:1	-0.5759181	2.29608116
AHexCer 68:2;O2|AHexCer (O-26:0)18:1;O2/24:1	-0.3197114	0.57700932
Cer 42:0;O4|Cer 18:0;O3/24:0(2OH)	-0.3387125	1.2923004
Cer 42:0;O4|Cer 18:0;O3/24:0(2OH)	-0.3799762	0.78097876
Cer 38:0;O3|Cer 18:0;O2/20:0;O	0.08955929	0.16187498
Cer 40:0;O3|Cer 18:0;O2/22:0;O	0.05933173	0.11096878
Cer 41:0;O3|Cer 18:0;O2/23:0;O	0.04097067	0.06814776
Cer 41:0;O3|Cer 18:0;O2/23:0;O	-0.3345626	0.79613699
Cer 41:0;O3|Cer 18:0;O2/23:0;O	-0.3327213	0.94465608
Cer 42:0;O3|Cer 18:0;O2/24:0;O	-0.0665307	0.11670299
Cer 43:0;O3|Cer 18:0;O2/25:0;O	-0.2450786	0.93756599
Cer 36:1;O3|Cer 18:1;O2/18:0;O	-0.7111746	2.18957383
Cer 36:1;O3|Cer 18:1;O2/18:0;O	0.01650922	0.02480206
Cer 38:1;O3|Cer 18:1;O2/20:0;O	-0.0429912	0.0748418
Cer 39:4;O3|Cer 18:2;O2/21:2;O	0.05294782	0.24780347
Cer 40:1;O3|Cer 18:1;O2/22:0;O	-0.4011355	1.5008345
Cer 41:1;O3|Cer 18:1;O2/23:0;O	-0.2450169	1.03334377
Cer 42:2;O3|Cer 18:1;O2/24:1;O	-0.0164637	0.04989694
Cer 36:0;O2|Cer 18:0;O2/18:0	0.29761102	0.55887808
Cer 42:1;O2|Cer 18:0;O2/24:1	-0.9442674	3.44480513
Cer 34:1;O2|Cer 18:1;O2/16:0	0.17444994	0.25099323
Cer 36:1;O2|Cer 18:1;O2/18:0	0.18643583	0.35205826
Cer 36:2;O2|Cer 18:1;O2/18:1	-0.2933033	0.85761067
Cer 37:1;O2|Cer 18:1;O2/19:0	0.34186801	0.73652622
Cer 38:1;O2|Cer 20:1;O2/18:0	0.39054902	0.8468282
Cer 38:2;O2|Cer 18:1;O2/20:1	-0.1386162	0.59835567
Cer 38:2;O2|Cer 18:1;O2/20:1	0.17969487	0.41543343

Cer 38:2;O2|Cer 18:1;O2/20:1	-0.1278746	0.53731676
Cer 39:2;O2|Cer 18:1;O2/21:1	-0.3987213	1.40219964
Cer 40:1;O2|Cer 18:1;O2/22:0	-0.6560499	1.78539099
Cer 40:1;O2|Cer 18:1;O2/22:0	0.33514775	0.78482408
Cer 40:2;O2|Cer 18:1;O2/22:1	-0.2344395	0.98357324
Cer 40:2;O2|Cer 18:1;O2/22:1	0.05396735	0.10195189
Cer 41:1;O2|Cer 18:1;O2/23:0	-0.4579308	1.27545507
Cer 41:1;O2|Cer 18:1;O2/23:0	0.25989997	0.54729849
Cer 41:2;O2|Cer 18:1;O2/23:1	-0.0404865	0.13576375
Cer 41:2;O2|Cer 18:1;O2/23:1	0.17065827	0.33303438
Cer 41:3;O2|Cer 18:2;O2/23:1	-0.2832074	1.50763867
Cer 42:1;O2|Cer 18:1;O2/24:0	0.16418863	0.30625221
Cer 42:2;O2|Cer 18:1;O2/24:1	0.09890724	0.17598615
Cer 42:2;O2|Cer 18:1;O2/24:1	0.00874934	0.01505132
Cer 42:2;O2|Cer 18:1;O2/24:1	-0.546536	3.26158831
Cer 42:3;O2|Cer 18:1;O2/24:2	0.02956099	0.07967117
Cer 42:3;O2|Cer 18:1;O2/24:2	-0.4389304	2.40737821
Cer 44:2;O2|Cer 20:1;O2/24:1	0.10430218	0.22940874
DG 30:0|DG 14:0_16:0	0.08303519	0.3506018
DG 32:0|DG 16:0_16:0	-0.4699757	1.1020207
DG 32:1|DG 14:0_18:1	-0.2235818	1.89604004
DG 33:0|DG 16:0_17:0	-0.1140645	0.38692121
DG 33:1|DG 16:0_17:1	-0.3482149	2.27553779
DG 34:0|DG 16:0_18:0	-0.4029536	1.07447927
DG 34:1|DG 16:0_18:1	-0.0470896	0.49435419
DG 34:2|DG 16:1_18:1	-0.2765287	4.06223582
DG 35:0|DG 17:0_18:0	-0.445267	1.29930513
DG 35:1|DG 17:0_18:1	-0.3252624	1.44420213
DG 36:0|DG 18:0_18:0	-0.4184709	1.19886529
DG 36:1|DG 18:0_18:1	-0.3835605	1.55274404
DG 36:3|DG 18:0_18:3	-0.3137572	2.7341523
DG 36:4|DG 18:2_18:2	-1.0274557	2.59210756
DG 36:5|DG 16:0_20:5	-0.3266892	2.646129
DG 36:5|DG 16:1_20:4	-0.1684731	2.51968125
DG 36:6|DG 18:3_18:3	-0.3599958	3.07130692
DG 37:0|DG 16:0_21:0	-0.2706996	0.73109744
DG 37:1|DG 19:0_18:1	-0.4408755	1.28177223
DG 37:2|DG 18:1_19:1	-0.4825237	1.0757976
DG 37:4|DG 17:0_20:4	-0.3086618	0.47060462
DG 38:0|DG 18:0_20:0	-0.2797202	0.66780441
DG 38:1|DG 20:0_18:1	-0.4714385	1.26951496
DG 38:2|DG 18:1_20:1	-0.5821039	1.9648932
DG 38:3|DG 18:0_20:3	-0.3430241	0.61070542
DG 38:3|DG 18:0_20:3	-0.2954085	0.50085792
DG 38:4|DG 18:1_20:3	-0.2220219	1.21368949
DG 38:6|DG 16:0_22:6	0.33772605	0.72759414
DG 39:0|DG 16:0_23:0	-0.4317299	1.37548478
DG 39:1|DG 21:0_18:1	-0.4554632	1.2106297
DG 39:2|DG 16:1_23:1	-0.5039079	1.73816823
DG 40:0|DG 16:0_24:0	-0.4665246	1.36883165
DG 40:1|DG 22:0_18:1	-0.4402739	1.21180681
DG 40:2|DG 18:1_22:1	-0.5287192	1.35879155

DG 40:4|DG 18:0_22:4	-0.3565143	0.88267455
DG 40:5|DG 20:1_20:4	-0.3183993	0.96970775
DG 40:6|DG 18:0_22:6	-0.2058179	0.48209912
DG 41:0|DG 16:0_25:0	-0.5083593	1.198261
DG 41:1|DG 23:0_18:1	-0.4454719	1.2135674
DG 41:2|DG 18:1_23:1	-0.636915	1.85392902
DG 42:1|DG 24:0_18:1	-0.4480617	1.19830111
DG 42:2|DG 18:1_24:1	-0.5339689	1.38867324
DG 42:3|DG 18:1_24:2	-0.526461	1.46553358
DG 42:4|DG 18:0_24:4	-0.3832723	0.76952362
DG 42:7|DG 18:1_24:6	-0.1512892	0.18760369
DG 43:1|DG 25:0_18:1	-0.5295158	1.53604437
DG 44:1|DG 26:0_18:1	-0.5765638	1.58795006
DG 44:2|DG 20:1_24:1	-0.688958	2.07879445
DG O-36:2|DG O-19:1_17:1	-0.3887874	2.30277818
DG O-38:7|DG O-16:1_22:6	0.12007776	0.48107135
DG O-40:5|DG O-18:1_22:4	-0.3693372	1.1074781
DG O-40:7|DG O-18:1_22:6	0.22653238	1.4293784
DG O-40:8|DG O-18:2_22:6	0.18751325	0.65217076
LPC O-18:1	0.46772831	0.8634543
LPC O-18:2	-0.0998139	0.28551559
LPE O-16:0	0.05541597	0.18538931
LPE O-20:4	-0.2204174	0.86855343
LPE P-16:1	0.02127584	0.13038631
LPE P-18:1	-0.0742112	0.87127499
LPE P-18:2	0.09425485	0.97814835
LPE P-18:2	-0.0745166	0.30699227
LPE P-18:2	-0.0714477	0.29528215
LPE P-18:3	0.08452715	0.23520916
PC O-30:0|PC O-16:0_14:0	-0.0586728	1.30371149
PC O-32:0|PC O-16:0_16:0	0.34268491	2.6873251
PC O-32:1|PC O-16:0_16:1	-0.0217278	0.47768536
PC O-32:1|PC O-16:1_16:0	0.29703585	4.22865448
PC O-34:1|PC O-16:0_18:1	0.16472341	2.65078201
PC O-34:1|PC O-18:1_16:0	0.29288726	3.16990073
PC O-34:2|PC O-16:1_18:1	-0.0563664	0.09072103
PC O-35:6|PC O-16:2_19:4	0.16014967	0.229448
PC O-36:0|PC O-20:0_16:0	0.17133274	0.93321228
PC O-36:1|PC O-16:1_20:0	-0.2132503	1.36103784
PC O-36:1|PC O-18:0_18:1	-0.3217135	2.44557361
PC O-36:1|PC O-18:1_18:0	-0.4346912	1.10269556
PC O-36:2|PC O-18:1_18:1	-0.2064049	1.76566028
PC O-36:2|PC O-18:1_18:1	-0.0070789	0.08043562
PC O-36:3|PC O-18:3_18:0	-0.0459173	0.22447051
PC O-38:2|PC O-18:1_20:1	-0.3839028	0.43518465
PC O-38:3|PC O-20:3_18:0	-0.3646108	1.87603903
PC O-38:4|PC O-16:0_22:4	0.25899117	1.65479017
PC O-38:5|PC O-18:1_20:4	0.25771521	2.90725332
PC O-38:5|PC O-18:1_20:4	0.29512361	1.84538562
PC O-40:5|PC O-18:0_22:5	0.44220047	1.79404163
PC O-40:6|PC O-18:0_22:6	0.27778699	1.98653313
PC O-40:7|PC O-18:1_22:6	0.36303162	2.58084415

HexCer 40:0;O4|HexCer 18:0;O3/22:0(2OH)	-0.3999735	1.18844931
HexCer 42:0;O4|HexCer 18:0;O3/24:0(2OH)	-0.347267	1.39827122
HexCer 39:2;O3|HexCer 18:1;O2/21:1;O	-0.4312533	2.11403406
HexCer 34:1;O2|HexCer 18:1;O2/16:0	-0.3886437	2.07430424
HexCer 36:1;O2|HexCer 18:1;O2/18:0	-0.5406877	2.05077575
HexCer 36:1;O2|HexCer 18:1;O2/18:0	-0.6930543	3.36669858
HexCer 36:2;O2|HexCer 18:1;O2/18:1	0.07032501	0.18649215
HexCer 36:2;O2|HexCer 18:2;O2/18:0	-0.5085245	3.11445892
HexCer 38:1;O2|HexCer 18:1;O2/20:0	-0.3402777	1.59530639
HexCer 38:2;O2|HexCer 18:1;O2/20:1	-0.3936252	1.30399375
HexCer 39:1;O2|HexCer 18:1;O2/21:0	-0.3358209	1.25572016
HexCer 39:2;O2|HexCer 18:1;O2/21:1	-0.3350602	1.00275899
HexCer 40:1;O2|HexCer 18:1;O2/22:0	-0.4958544	2.17396888
HexCer 40:2;O2|HexCer 18:1;O2/22:1	-1.3862713	5.17897256
HexCer 40:2;O2|HexCer 18:1;O2/22:1	-0.3930113	1.59467014
HexCer 40:2;O2|HexCer 18:1;O2/22:1	-0.7378357	4.11924591
HexCer 41:1;O2|HexCer 18:1;O2/23:0	-0.3643393	1.44821087
HexCer 41:1;O2|HexCer 18:1;O2/23:0	-0.4045329	1.67361364
HexCer 41:2;O2|HexCer 18:1;O2/23:1	-0.2599849	1.0240797
HexCer 41:2;O2|HexCer 18:1;O2/23:1	-0.4661695	2.67506355
HexCer 42:1;O2|HexCer 18:1;O2/24:0	-0.4347183	1.83310411
HexCer 42:2;O2|HexCer 18:1;O2/24:1	-0.3808304	1.56917157
HexCer 42:2;O2|HexCer 18:1;O2/24:1	-0.6290771	3.84619721
HexCer 42:2;O2|HexCer 18:1;O2/24:1	-0.5121581	3.13599902
HexCer 42:3;O2|HexCer 18:1;O2/24:2	-0.4366697	2.74164466
HexCer 42:3;O2|HexCer 18:1;O2/24:2	-0.9723223	2.97401012
HexCer 42:4;O2|HexCer 18:2;O2/24:2	-0.575322	3.04266301
HexCer 43:2;O2|HexCer 18:1;O2/25:1	-0.3788148	1.2816646
HexCer 44:1;O2|HexCer 18:1;O2/26:0	-0.6240869	1.73863937
HexCer 44:2;O2|HexCer 18:1;O2/26:1	-0.5514977	2.83696858
HexCer 44:2;O2|HexCer 20:1;O2/24:1	-0.5085877	1.62397576
HexCer 44:3;O2|HexCer 18:1;O2/26:2	-0.5002161	2.25608083
LPC 14:0/0:0	0.09078203	1.10351718
LPC 16:0	0.15897398	1.41396447
LPC 16:0/0:0	0.09593189	1.26173955
LPC 16:1	0.73389946	1.5700628
LPC 16:1	0.29435817	1.17787801
LPC 16:1/0:0	0.23169168	1.80426593
LPC 17:0/0:0	-0.0245848	0.62775397
LPC 18:0	-0.104163	0.90388704
LPC 18:0/0:0	0.00742698	0.05390441
LPC 18:1	0.40573814	1.67455577
LPC 18:1/0:0	0.31592188	1.96309396
LPC 18:1/0:0	0.11922552	1.0937807
LPC 18:2	0.46702441	2.24391414
LPC 18:2/0:0	0.3319849	1.76343459
LPC 19:0/0:0	-0.1299852	1.01238333
LPC 20:0	-0.5318968	2.54796867
LPC 20:0/0:0	0.00327852	0.03788099
LPC 20:0/0:0	-0.2079159	1.26673463
LPC 20:1	0.22688236	1.71284686
LPC 20:1/0:0	-0.0142646	0.29203412

LPC 20:2	0.40472438	1.36854277
LPC 20:2/0:0	0.28580996	1.52234255
LPC 20:3/0:0	0.28133831	1.60459848
LPC 20:4	0.73129393	1.25724002
LPC 20:4/0:0	0.29534838	2.67133511
LPC 22:1/0:0	-0.1364135	1.03355124
LPC 22:4/0:0	0.41331498	1.49666607
LPC 22:5	0.65377598	1.24607054
LPC 22:5	0.71321321	1.3807388
LPC 22:5/0:0	0.34925522	1.3139452
LPC 22:5/0:0	0.42187731	1.27086195
LPC 22:6	0.77304605	1.17839146
LPC 22:6/0:0	0.74463919	1.3613746
LPC 23:0/0:0	-0.1646246	1.16023625
LPC 24:0/0:0	-0.2608999	2.05477622
LPC 24:1	-0.2132938	1.42842563
LPC 24:4/0:0	0.38756748	0.93583722
LPC 24:6/0:0	0.76971534	1.50259609
LPC 25:0/0:0	-1.0321402	3.74320038
LPC 26:1/0:0	-0.3538144	2.18026565
LPE 16:0	0.01736311	0.13280014
LPE 16:1	0.15267724	1.27905298
LPE 17:0	0.07699156	0.93510389
LPE 18:0	0.0903116	0.97736532
LPE 18:0	-0.212041	1.40502524
LPE 18:1	-0.0169768	0.18591051
LPE 18:1	-0.0658493	0.59952134
LPE 18:2	0.34228913	0.96452874
LPE 18:2	0.29777784	1.244022
LPE 19:1	-0.8318204	1.79409386
LPE 20:1	-0.5808938	2.2082309
LPE 20:1	-0.5041073	1.86630234
LPE 20:4	0.51755269	1.34578037
LPE 20:4	0.08561147	0.81886329
LPE 22:4	-0.1028277	0.64046453
LPE 22:4	0.20426175	2.91254649
LPE 22:5	0.19508132	1.19430451
LPE 22:6	0.24259983	1.46265852
LPE 22:6	0.66756977	1.50321305
LPE 24:6	0.35697324	2.75588244
PC 32:0|PC 16:0_16:0	0.04432001	0.58039704
PC 32:1|PC 16:0_16:1	0.08388504	1.23977063
PC 32:1|PC 16:0_16:1	0.04641068	0.32623096
PC 32:2|PC 16:1_16:1	0.55835823	3.23485155
PC 34:0|PC 16:0_18:0	0.24944256	2.60949905
PC 34:1|PC 16:0_18:1	-0.1218315	2.1861844
PC 34:1|PC 16:0_18:1	-0.0707119	0.1390437
PC 34:2|PC 16:0_18:2	0.11784678	0.95618079
PC 34:2|PC 16:1_18:1	0.04279985	0.64687599
PC 34:3|PC 16:0_18:3	0.17064353	1.04447952
PC 34:4|PC 14:0_20:4	0.55921593	2.81555874
PC 35:4|PC 15:0_20:4	0.59126472	3.63041352

PC 36:1|PC 18:0_18:1	-0.0472843	2.99134539
PC 36:2|PC 18:0_18:2	0.06499123	0.34766278
PC 36:2|PC 18:1_18:1	-0.0020559	0.03446873
PC 36:3|PC 16:0_20:3	0.3204417	2.73109911
PC 36:3|PC 16:0_20:3	0.16855259	1.07886118
PC 36:3|PC 16:0_20:3	0.19672016	1.05719481
PC 36:4|PC 16:0_20:4	0.09202547	0.83900401
PC 36:4|PC 18:2_18:2	0.36604662	1.80787181
PC 36:5|PC 16:0_20:5	0.66426631	2.27017017
PC 36:5|PC 16:1_20:4	0.70909881	2.64011782
PC 36:6|PC 14:0_22:6	0.76378991	2.47083137
PC 37:2|PC 18:1_19:1	0.04872686	0.68670233
PC 38:2|PC 18:1_20:1	-0.1014208	3.45107668
PC 38:3|PC 18:0_20:3	0.2271611	3.1412405
PC 38:3|PC 18:0_20:3	0.21665274	2.90906
PC 38:4|PC 18:0_20:4	0.11601427	0.89272312
PC 38:4|PC 18:1_20:3	0.20142515	0.87275603
PC 38:5|PC 18:1_20:4	0.13264495	0.61665392
PC 38:6|PC 18:2_20:4	0.58758024	2.05532424
PC 38:7|PC 16:1_22:6	0.8219242	2.60178425
PC 39:1|PC 21:0_18:1	-0.1695083	1.076379
PC 39:4|PC 17:0_22:4	0.3283636	2.78786397
PC 39:4|PC 19:0_20:4	0.18115639	1.66941998
PC 39:5|PC 19:1_20:4	0.17892345	3.25417318
PC 39:6|PC 17:0_22:6	0.28900739	1.30833058
PC 40:0|PC 16:0_24:0	-0.4121493	1.20398891
PC 40:2|PC 20:1_20:1	-0.2361418	2.03855698
PC 40:5|PC 18:0_22:5	0.26370052	1.45858405
PC 40:6|PC 16:0_24:6	0.29842847	1.65206351
PC 40:6|PC 20:2_20:4	0.45486519	1.93298997
PC 40:7|PC 18:1_22:6	0.42533543	1.51848605
PC 40:8|PC 18:2_22:6	1.09881557	2.19236906
PC 41:1|PC 23:0_18:1	-0.1671378	0.64156165
PC 41:6|PC 19:0_22:6	0.39156435	2.22762975
PC 42:1|PC 24:0_18:1	-0.4340225	2.68658549
PC 42:10|PC 20:4_22:6	0.97450564	1.74198091
PC 42:4|PC 22:0_20:4	-0.0691459	0.7259404
PC 42:6|PC 18:0_24:6	0.3296031	2.94326512
PC 42:7|PC 20:1_22:6	0.40123331	1.40015928
PC 42:9|PC 20:4_22:5	0.85749713	2.15169943
PC 43:1|PC 25:0_18:1	-0.3647945	1.2428403
PC 43:2|PC 18:1_25:1	-0.196737	0.53447241
PC 44:11|PC 22:5_22:6	0.80575818	1.69149039
PC 44:5|PC 24:1_20:4	-0.1508173	1.3928465
SHexCer 36:1;O3|SHexCer 18:1;O2/18:0;O	-0.0300713	0.14836135
SHexCer 38:1;O3|SHexCer 18:1;O2/20:0;O	-0.2488082	1.45938573
SHexCer 38:2;O3|SHexCer 18:2;O2/20:0;O	-0.1602638	0.17599247
SHexCer 40:1;O3|SHexCer 18:1;O2/22:0;O	-0.4780859	1.99155277
SHexCer 40:2;O3|SHexCer 18:1;O2/22:1;O	-0.5679255	3.51760486
SHexCer 41:0;O3|SHexCer 18:0;O2/23:0;O	-0.6214041	1.78571668
SHexCer 41:1;O3|SHexCer 18:1;O2/23:0;O	-0.5173601	1.85026543
SHexCer 41:2;O3|SHexCer 18:1;O2/23:1;O	-0.8001313	3.1520578

SHexCer 42:1;O3|SHexCer 18:1;O2/24:0;O	-1.2156518	4.20588074
SHexCer 42:1;O3|SHexCer 18:1;O2/24:0;O	-0.4058683	1.60952041
SHexCer 42:2;O3|SHexCer 18:1;O2/24:1;O	-0.8010889	3.8382715
SHexCer 42:3;O3|SHexCer 18:2;O2/24:1;O	-0.5201861	3.2342074
SHexCer 43:1;O3|SHexCer 18:1;O2/25:0;O	-0.2348052	0.78068938
SHexCer 43:2;O3|SHexCer 18:1;O2/25:1;O	-0.732243	2.54710177
SHexCer 44:2;O3|SHexCer 18:1;O2/26:1;O	-0.6420872	2.84047524
SM 26:1;O3	-0.1957355	1.05498851
SM 29:2;O3	0.3577205	0.35435975
SM 34:2;O3	-0.5060138	0.55521709
SM 44:3;O2|SM 18:1;O2/26:2	0.02812059	0.35873509
TG 48:1|TG 16:0_16:0_16:1	-0.069162	0.9280422
TG 48:2|TG 14:0_16:1_18:1	-0.231938	1.09897749
TG 49:0|TG 16:0_16:0_17:0	-0.6899961	1.02346057
TG 49:3|TG 15:0_16:1_18:2	-0.8840728	1.41130383
TG 50:0|TG 16:0_16:0_18:0	-0.0723759	0.17233667
TG 50:1|TG 16:0_16:0_18:1	0.07035258	0.80228802
TG 50:2|TG 16:0_16:1_18:1	-0.105208	1.40867081
TG 50:3|TG 16:1_16:1_18:1	-0.2946481	2.53542608
TG 50:4|TG 16:0_18:1_16:3	0.0710414	0.24004797
TG 51:0|TG 16:0_17:0_18:0	-0.94901	0.98102267
TG 52:0|TG 16:0_18:0_18:0	-0.1497609	0.43418975
TG 52:1|TG 16:0_18:0_18:1	0.06379515	0.36189522
TG 52:2|TG 16:0_18:1_18:1	-0.079296	1.10295717
TG 52:3|TG 16:0_18:1_18:2	-0.2573019	2.71906425
TG 52:4|TG 16:1_18:1_18:2	-0.3029824	4.81308569
TG 52:5|TG 16:1_18:2_18:2	-0.4881913	1.91599742
TG 52:6|TG 14:0_16:0_22:6	0.30847513	2.37423857
TG 52:6|TG 16:1_18:2_18:3	-0.3545853	1.60917576
TG 53:0|TG 16:0_18:0_19:0	-0.6082018	1.15032724
TG 53:1|TG 16:0_18:0_19:1	-0.2015376	1.55360765
TG 53:2|TG 16:0_18:1_19:1	-0.2624886	2.01449388
TG 53:4|TG 17:0_18:2_18:2	-0.3496258	1.7517389
TG 54:0|TG 16:0_18:0_20:0	-0.4958721	1.32092283
TG 54:1|TG 16:0_18:0_20:1	-0.1121919	0.48996588
TG 54:2|TG 16:0_18:1_20:1	-0.1683948	1.28625888
TG 54:3|TG 18:0_18:1_18:2	-0.374333	2.45478437
TG 54:5|TG 18:1_18:2_18:2	-0.4344453	2.23514746
TG 54:6|TG 16:0_16:0_22:6	0.26594161	2.34602279
TG 54:6|TG 18:1_18:2_18:3	-0.3772022	1.79630318
TG 54:7|TG 18:2_18:2_18:3	-0.4507086	2.3968347
TG 54:8|TG 18:2_18:3_18:3	-0.4515339	1.48993094
TG 55:1|TG 16:0_21:0_18:1	-0.3482002	1.65840653
TG 55:2|TG 16:0_18:1_21:1	-0.2539257	2.38593345
TG 56:0|TG 14:0_18:0_24:0	-0.5992948	1.47720777
TG 56:0|TG 15:0_15:0_26:0	-0.8609125	1.27080159
TG 56:1|TG 16:0_16:0_24:1	-0.2468349	1.01946518
TG 56:10|TG 14:0_20:4_22:6	1.13094013	2.03768544
TG 56:2|TG 16:0_18:1_22:1	-0.1849284	0.48741332
TG 56:2|TG 18:0_18:1_20:1	-0.1945398	1.21452399
TG 56:3|TG 18:0_18:0_20:3	-0.1374419	0.45655096
TG 56:4|TG 16:0_18:0_22:4	0.11071208	0.48563524

TG 56:6|TG 16:0_18:1_22:5	0.25399107	1.7464815
TG 56:7|TG 16:0_18:1_22:6	0.33158989	1.86483053
TG 57:0|TG 16:0_18:0_23:0	-0.6785437	1.38931863
TG 57:1|TG 16:0_23:0_18:1	-0.3585259	1.74544833
TG 58:0|TG 16:0_18:0_24:0	-0.5336601	2.00411253
TG 58:1|TG 16:0_18:0_24:1	-0.2787683	1.08730173
TG 58:2|TG 16:0_18:1_24:1	-0.2369179	1.3317485
TG 58:3|TG 18:1_18:1_22:1	-0.2693833	1.57340442
TG 58:4|TG 18:0_18:0_22:4	0.20359389	0.88362412
TG 58:6|TG 18:0_18:0_22:6	0.07765684	0.44053375
TG 58:7|TG 16:0_20:1_22:6	0.29357555	2.76498874
TG 58:8|TG 18:1_18:1_22:6	0.56268137	1.88284272
TG 59:3|TG 18:1_18:1_23:1	0.07738706	0.14465178
TG 60:0|TG 16:0_20:0_24:0	-0.5021737	1.311871
TG 60:2|TG 18:0_18:1_24:1	-0.1649508	0.62243124
TG 60:3|TG 18:1_18:1_24:1	-0.3176304	1.57369083
TG 60:7|TG 16:0_22:1_22:6	0.31433849	1.23886327
TG 61:3|TG 18:1_18:1_25:1	0.23433607	0.37762825
TG 62:12|TG 18:0_22:6_22:6	0.50041188	2.13225275
TG 62:3|TG 18:1_20:1_24:1	-0.5672967	1.37866033
CL 68:7|CL 16:1_16:1_16:1_20:4	1.64627065	1.84774964
CL 68:4|CL 16:0_18:2_16:1_18:1	0.59495645	1.748587
CL 68:3|CL 16:0_18:1_16:1_18:1	0.48634065	1.08314739
CL 68:2|CL 16:0_18:1_18:0_16:1	1.73313995	1.99536363
CL 68:2|CL 16:0_18:1_16:0_18:1	0.41079839	0.78606347
CL 69:4|CL 16:1_18:1_17:1_18:1	1.18207186	2.68871105
CL 70:8|CL 16:1_18:2_16:1_20:4	1.0714558	2.02190579
CL 70:6|CL 16:0_18:1_16:1_20:4	0.59637503	1.46804318
CL 70:5|CL 16:1_18:1_18:1_18:2	0.58846338	1.78363103
CL 70:4|CL 18:0_18:2_16:1_18:1	0.60359889	1.49059603
CL 70:4|CL 16:1_18:1_18:1_18:1	0.47479669	1.27640072
CL 70:3|CL 16:0_18:1_18:1_18:1	0.35457164	0.79096095
CL 71:5|CL 17:1_18:1_18:1_18:2	0.93578537	2.23022358
CL 72:10|CL 16:1_20:4_16:1_20:4	0.57781194	1.17962032
CL 72:9|CL 16:0_20:4_16:1_20:4	0.73813737	1.4076585
CL 72:8|CL 16:1_18:1_18:2_20:4	0.55075931	1.6636985
CL 72:7|CL 16:0_18:2_18:1_20:4	0.51303105	1.42667168
CL 72:6|CL 18:1_18:2_18:1_18:2	0.66922838	1.91584197
CL 72:5|CL 18:1_18:1_18:1_18:2	0.53536055	1.545782
CL 72:4|CL 18:1_18:1_18:1_18:1	0.40562133	1.04362066
CL 73:7|CL 17:1_18:1_18:1_20:4	0.7029252	1.39246976
CL 74:12|CL 16:1_20:4_16:1_22:6	1.19876526	1.66347257
CL 74:11|CL 16:1_20:4_18:2_20:4	0.61101842	1.68851099
CL 74:10|CL 16:1_20:4_18:1_20:4	0.49464481	1.19986868
CL 74:9|CL 16:0_18:2_18:1_22:6	0.24165686	0.59513699
CL 74:9|CL 16:1_18:1_20:3_20:4	0.52379784	1.62686308
CL 74:8|CL 18:1_18:2_18:1_20:4	0.46958058	1.37079139
CL 74:8|CL 18:1_18:1_18:2_20:4	0.34272088	0.74473349
CL 74:7|CL 18:1_18:2_18:1_20:3	0.50404897	1.443054
CL 74:7|CL 18:1_18:1_18:1_20:4	0.40176914	1.00636871
CL 74:7|CL 18:0_18:2_18:1_20:4	0.39851023	0.9286292
CL 75:10|CL 17:1_20:4_18:1_20:4		0.78882853

CL 76:13|CL 16:1_20:4_18:2_22:6	0.67857837	1.65570369
CL 76:12|CL 16:1_20:4_18:1_22:6	0.82365805	1.17201813
CL 76:11|CL 18:1_20:4_18:2_20:4	0.53360259	1.40004878
CL 76:10|CL 18:1_20:4_18:2_20:3	0.49206346	1.39197831
CL 76:9|CL 18:0_18:2_20:3_20:4	0.33498655	0.88980601
CL 78:15|CL 16:1_20:4_20:4_22:6	0.79048728	1.06384005
CL 78:13|CL 18:1_20:4_18:2_22:6	0.48377017	1.15389588
CL 78:12|CL 18:1_20:4_18:1_22:6	0.48323751	1.21207353
CL 80:15|CL 18:1_20:4_20:4_22:6	0.55478369	1.13328918
CL 80:14|CL 18:1_22:6_18:1_22:6	0.48075867	1.0511278
CL 82:18|CL 18:2_22:6_20:4_22:6	1.56139326	1.77096561
CL 82:14|CL 18:1_22:6_20:3_22:4	1.63326897	2.81875485
CL 84:20|CL 20:4_22:6_20:4_22:6	1.37433536	1.38349141
CL 84:19|CL 18:1_22:6_22:6_22:6	0.72467639	1.19513981
LPG O-20:2	-0.4501714	1.47825304
PE O-32:2|PE O-18:2_14:0	-1.0954367	5.38910814
PE O-32:1|PE O-16:1_16:0	-0.0023463	0.01266527
PE O-32:1|PE O-16:0_16:1	0.06966582	0.3138811
PE O-32:0|PE O-16:0_16:0	0.34170944	1.43504015
PE O-33:1|PE O-17:1_16:0	0.06718082	0.20952805
PE O-34:5|PE O-14:1_20:4	0.62856117	3.01042015
PE O-34:3|PE O-16:1_18:2	-0.2486507	1.25764998
PE O-34:2|PE O-16:1_18:1	-0.5713092	4.2809294
PE O-34:1|PE O-16:0_18:1	-0.0798288	0.4985091
PE O-34:0|PE O-18:0_16:0	-0.0546129	0.19891512
PE O-35:3|PE O-18:2_17:1	-0.5241176	2.92882455
PE O-35:1|PE O-17:0_18:1	-0.1291728	0.36751291
PE O-36:6|PE O-16:1_20:5	-0.0627681	0.63017484
PE O-36:5|PE O-16:1_20:4	-0.0230238	0.2804155
PE O-36:4|PE O-16:0_20:4	-0.105964	0.69187076
PE O-36:4|PE O-16:1_20:3	-0.1989715	2.05610172
PE O-36:3|PE O-18:2_18:1	-0.5973854	3.7817692
PE O-36:2|PE O-18:1_18:1	-0.3826178	2.24087109
PE O-36:0|PE O-20:0_16:0	-0.338505	1.88821078
PE O-37:6|PE O-17:2_20:4	-0.2186695	1.9402368
PE O-37:5|PE O-17:1_20:4	-0.0683659	0.36455237
PE O-37:4|PE O-17:1_20:3	-0.3366214	1.62190768
PE O-37:3|PE O-18:2_19:1	-0.5465435	2.69487878
PE O-37:2|PE O-17:1_20:1	-0.493069	2.15475387
PE O-38:8|PE O-16:2_22:6	0.36834977	3.32563544
PE O-38:7|PE O-16:1_22:6	0.17101998	1.33123291
PE O-38:6|PE O-20:5_18:1	0.37623718	1.4562484
PE O-38:6|PE O-18:2_20:4	-0.1522716	2.56129364
PE O-38:5|PE O-18:1_20:4	-0.0022927	0.05670542
PE O-38:5|PE O-16:1_22:4	-0.0703135	1.16943002
PE O-38:5|PE O-18:2_20:3	-0.38128	2.72439154
PE O-38:4|PE O-18:1_20:3	-0.1918389	1.25901955
PE O-38:4|PE O-16:0_22:4	0.12433232	1.066045
PE O-38:4|PE O-18:2_20:2	-0.2518664	2.2338582
PE O-38:4|PE O-18:1_20:3	-0.346377	3.28361376
PE O-38:3|PE O-18:2_20:1	-0.5300937	2.591883
PE O-38:2|PE O-18:1_20:1	-0.5415297	2.50477205

PE O-38:2|PE O-18:1_20:1	-0.4969797	2.14762508
PE O-39:8|PE O-17:2_22:6	1.65285497	2.26227134
PE O-38:1|PE O-18:1_20:0	-0.5104767	2.15336161
PE O-38:1|PE O-18:1_20:0	-0.4309088	1.15439453
PE O-39:7|PE O-17:1_22:6	0.05867115	1.33143865
PE O-38:0|PE O-18:0_20:0	-0.4780323	1.7314354
PE O-39:6|PE O-17:0_22:6	-0.1206171	1.40064831
PE O-39:3|PE O-18:2_21:1	-0.5203801	2.28712859
PE O-40:9|PE O-20:5_20:4	0.39060274	2.70685368
PE O-40:9|PE O-18:3_22:6	0.34153093	2.31338761
PE O-39:2|PE O-18:1_21:1	-0.4241328	1.69564303
PE O-40:8|PE O-18:2_22:6	0.5309942	2.39528231
PE O-40:8|PE O-18:2_22:6	0.15787834	1.02124876
PE O-40:7|PE O-18:1_22:6	0.12471425	2.98228012
PE O-40:7|PE O-18:2_22:5	-0.0281302	0.34727327
PE O-40:6|PE O-18:2_22:4	-0.18165	1.84373444
PE O-40:6|PE O-18:0_22:6	0.01853685	0.33770722
PE O-40:5|PE O-18:1_22:4	-0.0259117	0.17905062
PE O-40:4|PE O-18:1_22:3	-0.1889408	1.40174147
PE O-40:4|PE O-18:0_22:4	0.18008919	1.81852269
PE O-40:3|PE O-20:2_20:1	-0.4721867	1.95693778
PE O-40:2|PE O-18:1_22:1	-0.3790582	1.35044582
PE O-41:6|PE O-21:3_20:3	-0.1283325	1.65711676
PE O-42:10|PE O-20:4_22:6	0.52540316	1.90669697
PE O-41:3|PE O-18:2_23:1	-0.435118	1.72089253
PE O-42:9|PE O-20:3_22:6	-0.4447389	0.53839848
PE O-41:2|PE O-18:1_23:1	-0.4168527	1.03586901
PE O-42:8|PE O-18:2_24:6	-0.3972339	3.01292186
PE O-42:7|PE O-18:1_24:6	-0.0231994	0.98513033
PE O-42:7|PE O-18:1_24:6	0.19736019	2.59951694
PE O-42:6|PE O-18:1_24:5	-0.1590325	0.59930407
PE O-42:5|PE O-18:1_24:4	0.08767162	0.56969581
PE O-42:5|PE O-20:1_22:4	-0.0116923	0.0553672
PE O-42:4|PE O-18:2_24:2	-0.0123963	0.06777614
PE O-42:3|PE O-22:2_20:1	-0.3990898	1.38035868
PE O-42:2|PE O-18:1_24:1	-0.3360198	0.95328302
PG O-38:7|PG O-16:1_22:6	0.65967368	3.40926252
PI O-36:4|PI O-16:0_20:4	0.42594785	2.95561025
PI O-38:6|PI O-16:0_22:6	0.43796446	2.62143891
PI O-38:5|PI O-18:1_20:4	0.41275897	2.10989009
PI O-38:4|PI O-18:0_20:4	0.13392905	0.32693481
PI O-40:7|PI O-18:1_22:6	0.55890453	2.16444458
PI O-40:6|PI O-18:0_22:6	0.4091091	3.29468601
LPG 16:1	-0.1283739	0.55089383
LPG 16:0	0.34183131	0.82027812
LPG 18:2	-0.1635586	0.43233727
LPG 18:2	0.01161337	0.05534205
LPG 18:1	-0.0193524	0.04729357
LPG 18:1	0.17242113	1.22352657
LPG 18:0	-0.0479142	0.4451076
LPG 18:0	0.16968195	1.08190752
LPG 20:4	0.2747399	2.70194323

LPG 20:4	-0.0495921	0.11371459
LPG 20:3	0.33581	1.61645317
LPG 20:3	-0.086536	0.19131486
LPG 20:3	0.17209825	1.07001099
LPG 20:1	0.11003233	1.17969271
LPG 22:6	-0.0087837	0.02277147
LPG 22:5	0.37355885	3.24076504
LPG 22:4	0.11429093	0.30145831
LPG 22:4	0.27676076	2.53037534
LPI 16:0	-0.0628959	0.31590319
LPI 18:1	0.06548082	0.10912354
LPI 18:0	0.05641666	1.25521361
LPI 18:0	-0.1103031	0.94038623
LPI 20:4	0.63001875	0.96597063
LPI 20:4	0.22293281	0.4017444
LPI 22:6	1.57007947	1.02078273
LPI 22:6	1.1931624	1.06248241
PE 22:0;O|PE 18:0_4:0;O	0.54101719	1.39990143
PE 24:1;O|PE 18:1_6:0;O	0.50302705	2.47693797
PE 34:2;O|PE 16:0_18:2;O	0.4211532	2.36688305
PE 34:1;O|PE 16:0_18:1;O	0.31877919	1.08952975
PE 36:5;O|PE 16:0_20:5;O	0.42951645	2.88140471
PE 36:5;O|PE 16:1_20:4;O	0.43213523	2.21848139
PE 36:5;O|PE 16:1_20:4;O	0.3841363	1.01878373
PE 36:5;O|PE 16:0_20:5;O	0.43255679	1.81610657
PE 36:4;O|PE 16:0_20:4;O	0.46811931	2.69841809
PE 36:4;O|PE 16:0_20:4;O	0.51351123	3.22415281
PE 36:4;O|PE 16:0_20:4;O	0.44717412	2.33203819
PE 36:4;O|PE 16:0_20:4;O	0.46469808	2.28108019
PE 36:4;O|PE 16:0_20:4;O	0.50997328	3.02392158
PE 36:3;O|PE 18:1_18:2;O	0.24541397	1.80612259
PE 36:2;O|PE 18:1_18:1;O	0.24041563	0.9681651
PE 36:2;O|PE 18:1_18:1;O	0.24114336	1.56504376
PE 36:1;O|PE 18:0_18:1;O	0.24318919	0.63879483
PE 37:5;O|PE 22:5_15:0;O	0.57983402	2.43145167
PE 37:4;O|PE 17:0_20:4;O	0.40025147	0.59667483
PE 36:4;O2|PE 16:0_20:4;O2	0.99932064	2.21253066
PE 36:4;O2|PE 16:0_20:4;O2	0.64644282	3.79095457
PE 36:2;O2|PE 18:1_18:1;O2	0.90678292	1.79730924
PE 36:2;O2|PE 18:1_18:1;O2	0.95735052	1.83539768
PE 38:6;O|PE 16:0_22:6;O	0.41590487	1.73645407
PE 38:6;O|PE 16:0_22:6;O	0.24658653	0.58583379
PE 38:6;O|PE 16:0_22:6;O	0.40056907	1.79891737
PE 38:6;O|PE 16:0_22:6;O	0.33884355	1.12173867
PE 38:6;O|PE 20:4_18:2;O	0.32705169	1.32513316
PE 38:5;O|PE 20:4_18:1;O	0.23724844	0.5471995
PE 38:5;O|PE 18:0_20:5;O	0.25021426	1.50701749
PE 38:5;O|PE 16:0_22:5;O	0.4687682	1.24882679
PE 38:5;O|PE 16:0_22:5;O	0.54154154	2.03382539
PE 38:5;O|PE 18:1_20:4;O	0.50273117	2.74428657
PE 38:5;O|PE 18:1_20:4;O	0.47165475	2.53241989
PE 38:5;O|PE 18:1_20:4;O	0.50789607	2.41054991

PE 38:4;O|PE 18:0_20:4;O	0.44344956	2.69450629
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PE 38:4;O|PE 16:0_22:4;O	0.32855159	0.76232674
PE 38:4;O|PE 18:0_20:4;O	0.40802588	2.06062006
PE 38:4;O|PE 18:0_20:4;O	0.41442586	2.38286454
PE 38:4;O|PE 18:1_20:3;O	0.50157387	2.78559385
PE 36:5;O3|PE 16:0_20:5;O3	0.57034907	2.48186994
PE 37:4;O2|PE 17:0_20:4;O2	1.80496739	2.16051871
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PE 36:4;O3|PE 16:0_20:4;O3	0.42832777	0.64096006
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PE 38:4;O2|PE 18:0_20:4;O2	1.18015545	2.35030434
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PE 40:7;O|PE 18:1_22:6;O	0.35576886	0.65141846
PE 40:7;O|PE 18:1_22:6;O	0.40355897	1.56012677
PE 40:6;O|PE 22:6_18:0;O	0.32220026	1.15414529
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PE 38:6;O3|PE 18:1_20:5;O3	0.41527814	2.3680823
PE 38:6;O3|PE 18:1_20:5;O3	0.49300804	2.72817891
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PE 38:4;O3|PE 18:1_20:3;O3	0.42408962	1.43516419
PE 38:3;O3|PE 18:0_20:3;O3	0.30477801	1.55174511
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PE 40:5;O2|PE 18:0_22:5;O2	0.57888696	2.44377994
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PE 40:6;O3|PE 18:0_22:6;O3	0.38318437	0.87711012
PE 40:6;O3|PE 18:0_22:6;O3	0.45432622	1.18933894
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PE 44:12;O|PE 22:6_22:6;O	0.98675202	2.04791567
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PE 40:6;O4|PE 22:6_18:0;O4	0.44618064	1.5956757
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PE 44:10;O|PE 22:4_22:6;O	0.86495887	1.5827436
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PE 44:10;O|PE 22:4_22:6;O	0.82222615	1.22734975
PE 44:10;O2|PE 22:6_22:4;O2	0.78158594	1.04157465
PE 44:10;O2|PE 22:4_22:6;O2	1.93771403	1.51462359
PE 44:10;O2|PE 22:4_22:6;O2	4.95422457	2.05784406
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PI 36:4;O|PI 16:0_20:4;O	0.05663712	0.16155084
PI 36:4;O|PI 16:0_20:4;O	0.14416121	0.62240809
PI 36:4;O2|PI 16:0_20:4;O2	0.38828621	0.47193921
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PI 38:4;O|PI 18:0_20:4;O	0.07251998	0.17421966
PI 36:4;O3|PI 16:0_20:4;O3	0.0493119	0.06639875
PI 38:4;O2|PI 18:0_20:4;O2	0.27702962	0.37919365
PI 38:4;O2|PI 18:0_20:4;O2	0.00213207	0.00208652
PI 38:4;O2|PI 18:0_20:4;O2	0.22762859	0.32972968
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PI 38:5;O3|PI 18:0_20:5;O3	-0.1047868	0.1741112
PI 38:5;O3|PI 18:0_20:5;O3	-0.0575143	0.08746832
PI 38:4;O3|PI 18:0_20:4;O3	-0.1156773	0.17259036
PI 38:4;O3|PI 18:0_20:4;O3	-0.113516	0.20975094
PI 38:4;O3|PI 18:0_20:4;O3	-0.1937356	0.41660905
PI 38:4;O4|PI 18:0_20:4;O4	0.27307609	0.4338049
PE 32:2|PE 16:1_16:1	0.33024306	5.6932559
PE 34:3|PE 16:1_18:2	0.23821583	2.67255969
PE 34:2|PE 16:0_18:2	0.01246607	0.07008669

PE 34:2|PE 16:1_18:1	0.14492374	2.38338777
PE 34:1|PE 16:0_18:1	-0.1931833	3.12542818
PE 34:0|PE 16:0_18:0	0.49500698	1.6726534
PE 35:2|PE 17:1_18:1	-0.364072	2.59169482
PE 36:5|PE 16:0_20:5	0.1796678	1.73689492
PE 36:5|PE 16:1_20:4	0.52629661	3.62406459
PE 36:4|PE 16:0_20:4	0.15842105	1.90490585
PE 36:3|PE 16:0_20:3	0.21144053	4.00636154
PE 36:3|PE 18:1_18:2	0.03373267	0.1590525
PE 36:2|PE 18:1_18:1	-0.2015522	3.33450034
PE 36:1|PE 18:0_18:1	-0.1130346	1.19087879
PE 36:0|PE 18:0_18:0	0.59304736	1.08756369
PE 37:4|PE 17:0_20:4	0.1837182	3.56333299
PE 37:2|PE 18:1_19:1	-0.4084907	2.47691581
PE 38:7|PE 16:1_22:6	0.45368853	3.97351893
PE 38:7|PE 16:1_22:6	0.63558135	2.69667425
PE 38:7|PE 18:3_20:4	0.7559714	2.0370713
PE 38:6|PE 16:0_22:6	-0.0163718	0.10239894
PE 38:6|PE 18:2_20:4	0.54215399	3.26434349
PE 38:5|PE 18:1_20:4	0.23721579	1.64402934
PE 38:4|PE 18:0_20:4	-0.0584945	1.21323362
PE 38:3|PE 18:0_20:3	0.05457433	0.51556548
PE 38:2|PE 18:1_20:1	-0.4978238	2.89724088
PE 38:1|PE 18:0_20:1	-0.3874577	2.16444145
PE 39:4|PE 19:0_20:4	-0.3318384	3.030543
PE 40:8|PE 18:2_22:6	0.54800173	2.18831542
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PE 40:5|PE 18:0_22:5	0.23090366	3.29049424
PE 40:4|PE 18:0_22:4	-0.0793509	0.44732087
PE 42:9|PE 20:3_22:6	0.66940812	2.178806
PE 42:8|PE 20:4_22:4	0.36208279	0.94047648
PE 42:7|PE 20:1_22:6	-0.3883134	1.73742947
PE 42:5|PE 18:0_24:5	0.18369523	1.9182151
PE 42:4|PE 18:0_24:4	0.12375361	1.16325421
PE 42:1|PE 24:0_18:1	-0.3511552	1.07142604
PE 44:12|PE 22:6_22:6	0.72014271	1.85450056
PE 44:10|PE 22:4_22:6	0.48738302	1.52934793
PE 46:12|PE 22:6_24:6	0.64745034	1.61450453
PE 46:10|PE 24:4_22:6	0.72980694	1.49341127
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PG 32:2|PG 16:1_16:1	0.73406124	1.09018303
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PG 33:1|PG 15:0_18:1	0.97475206	1.90734133
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PG 34:4|PG 18:1_16:3	0.53088305	0.8567537

PG 34:3|PG 16:1_18:2	0.6250715	1.27290382
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PG 34:2|PG 16:1_18:1	0.56909623	1.38947898
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PG 34:2|PG 16:1_18:1	0.46451274	1.91431236
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PG 36:4|PG 18:2_18:2	0.5258018	1.20576417
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PG 44:10|PG 22:4_22:6	0.2772177	0.3107868
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PI 34:2|PI 16:1_18:1	0.15750565	0.64839179
PI 34:1|PI 16:0_18:1	0.52373317	1.45561681
PI 34:0|PI 16:0_18:0	-0.1196679	0.62744517
PI 35:4|PI 15:0_20:4	0.23557773	1.44337393
PI 36:5|PI 16:1_20:4	0.33625815	1.52808181
PI 36:4|PI 16:0_20:4	0.13151325	1.25224294
PI 36:3|PI 16:0_20:3	-0.1169486	1.13721957
PI 36:3|PI 16:0_20:3	0.25662767	2.45092091
PI 36:2|PI 18:1_18:1	0.07333054	0.69919628
PI 36:1|PI 18:0_18:1	0.28504919	1.07361688
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PI 37:5|PI 17:1_20:4	0.12758783	0.61418775
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PI 38:3|PI 18:0_20:3	0.10663547	0.9382849
PI 39:6|PI 17:0_22:6	0.28206465	2.35194682
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PI 40:8|PI 20:4_20:4	1.6742844	1.24722866
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PI 40:7|PI 20:3_20:4	0.42246854	1.43200911
PI 40:7|PI 18:1_22:6	0.38245825	1.48050571
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PI 40:4|PI 20:0_20:4	0.11249706	1.49233331
PI 40:4|PI 18:0_22:4	-0.1076022	1.10891336
PI 42:10|PI 20:4_22:6	0.60628264	1.34725037
PI 42:9|PI 20:4_22:5	1.08758674	0.63899447
PI 42:8|PI 20:4_22:4	0.72368089	1.75479229
PI 44:12|PI 22:6_22:6	0.83185331	1.32119515
PI 44:10|PI 22:4_22:6	0.98314063	1.22720382

Data Description: Fig. 4G/Fig. S10D - Fold-change comparison between WT 24-month lipofuscin and total brain lipid metabolites (n = 3 biological replicates/genotype). AHexCer: acyl-hexosylceramide; Cer: ceramide; CL: cardiolipin; DG: diglyceride (diacylglycerol); EtherDG: ether-linked diglyceride; EtherLPC: ether-linked lysophosphatidylcholine; EtherLPE: ether-linked lysophosphatidylethanolamine; EtherLPG: ether-linked lysophosphatidylglycerol; EtherPC: ether-linked phosphatidylcholine; EtherPE: ether-linked phosphatidylethanolamine; EtherPG: ether-linked phosphatidylglycerol; EtherPI: ether-linked phosphatidylinositol; HexCer: hexosylceramide; LPC: lysophosphatidylcholine; LPE: lysophosphatidylethanolamine; LPG: lysophosphatidylglycerol; LPI: lysophosphatidylinositol; OxPE: oxidized phosphatidylethanolamine; OxPI: oxidized phosphatidylinositol; PC: phosphatidylcholine; PE: phosphatidylethanolamine; PG/BMP: phosphatidylglycerol/bis(monoacylglycero)phosphate; PI: phosphatidylinositol; SHexCer: sulfatide; SM: sphingomyelin; TG: triglyceride (triacylglycerol)

Fig. 4G/Fig. S10D - WT Lipid Metabolite Fold Change - Lipofuscin/Whole Brain		
Lipid Annotation	**log_{10}(WT Lipo/WB)**	**-log_{10}(p-value)**
AHexCer 52:1;O2|AHexCer (O-16:0)18:1;O2/18:0	-0.3219836	1.4201932
AHexCer 54:1;O2|AHexCer (O-18:0)18:1;O2/18:0	-0.3074153	1.54099354
AHexCer 56:2;O2|AHexCer (O-17:1)18:1;O2/21:0	-0.2843237	1.9838692
AHexCer 57:1;O2|AHexCer (O-16:0)18:1;O2/23:0	-0.3287987	1.97840643
AHexCer 58:1;O2|AHexCer (O-16:0)18:1;O2/24:0	-0.365647	2.66086628
AHexCer 58:2;O2|AHexCer (O-16:0)18:1;O2/24:1	-0.4824297	2.92115027
AHexCer 58:2;O2|AHexCer (O-16:0)18:1;O2/24:1	-0.8608899	3.49270428
AHexCer 59:1;O2|AHexCer (O-18:0)18:1;O2/23:0	-0.2563219	1.90523204
AHexCer 59:2;O2|AHexCer (O-18:0)18:1;O2/23:1	-0.3458376	1.54833539
AHexCer 60:3;O2|AHexCer (O-18:1)18:1;O2/24:1	-0.6451808	2.57852451
AHexCer 68:2;O2|AHexCer (O-26:0)18:1;O2/24:1	-0.6136489	1.29649307
Cer 42:0;O4|Cer 18:0;O3/24:0(2OH)	-0.0111118	0.01635924
Cer 42:0;O4|Cer 18:0;O3/24:0(2OH)	-0.0879919	0.13705271
Cer 38:0;O3|Cer 18:0;O2/20:0;O	-0.5577485	0.307304
Cer 40:0;O3|Cer 18:0;O2/22:0;O	0.50034794	1.19142446
Cer 41:0;O3|Cer 18:0;O2/23:0;O	0.36059887	0.73978123
Cer 41:0;O3|Cer 18:0;O2/23:0;O	-0.5799949	1.24297469
Cer 41:0;O3|Cer 18:0;O2/23:0;O	-0.1358124	0.38576336
Cer 42:0;O3|Cer 18:0;O2/24:0;O	0.06268576	0.14696507
Cer 43:0;O3|Cer 18:0;O2/25:0;O	-0.2466363	0.55808594
Cer 36:1;O3|Cer 18:1;O2/18:0;O	-0.6395965	2.06252057
Cer 36:1;O3|Cer 18:1;O2/18:0;O	0.66149286	1.69977088
Cer 38:1;O3|Cer 18:1;O2/20:0;O	0.55210896	1.07405816
Cer 39:4;O3|Cer 18:2;O2/21:2;O	-0.2746287	3.9906065
Cer 40:1;O3|Cer 18:1;O2/22:0;O	-0.2866255	2.09780092
Cer 41:1;O3|Cer 18:1;O2/23:0;O	-0.2480018	1.84092239
Cer 42:2;O3|Cer 18:1;O2/24:1;O	0.18694959	0.75037787
Cer 36:0;O2|Cer 18:0;O2/18:0	0.49264702	1.65997686
Cer 42:1;O2|Cer 18:0;O2/24:1	-1.3852967	2.87322209
Cer 34:1;O2|Cer 18:1;O2/16:0	0.18255672	0.95596265
Cer 36:1;O2|Cer 18:1;O2/18:0	0.28808862	1.76721715
Cer 36:2;O2|Cer 18:1;O2/18:1	-0.1953642	2.44504378
Cer 37:1;O2|Cer 18:1;O2/19:0	0.58213491	1.9425437
Cer 38:1;O2|Cer 20:1;O2/18:0	0.64268714	2.15913819

Cer 38:2;O2|Cer 18:1;O2/20:1	-0.0528439	1.04619732
Cer 38:2;O2|Cer 18:1;O2/20:1	1.20238255	1.92175349
Cer 38:2;O2|Cer 18:1;O2/20:1	-0.0588192	1.34731187
Cer 39:2;O2|Cer 18:1;O2/21:1	-0.1701091	0.5043885
Cer 40:1;O2|Cer 18:1;O2/22:0	-0.3062053	0.49886718
Cer 40:1;O2|Cer 18:1;O2/22:0	0.58578438	2.78691766
Cer 40:2;O2|Cer 18:1;O2/22:1	-0.1771048	2.23177484
Cer 40:2;O2|Cer 18:1;O2/22:1	0.10735425	0.26300108
Cer 41:1;O2|Cer 18:1;O2/23:0	-0.4229156	2.92948113
Cer 41:1;O2|Cer 18:1;O2/23:0	0.47215115	1.90156315
Cer 41:2;O2|Cer 18:1;O2/23:1	-0.007139	0.06783135
Cer 41:2;O2|Cer 18:1;O2/23:1	0.42581541	1.0020153
Cer 41:3;O2|Cer 18:2;O2/23:1	-0.0953821	0.43208017
Cer 42:1;O2|Cer 18:1;O2/24:0	0.31854731	1.30805683
Cer 42:2;O2|Cer 18:1;O2/24:1	0.0959101	0.7717964
Cer 42:2;O2|Cer 18:1;O2/24:1	0.13628034	0.30202894
Cer 42:2;O2|Cer 18:1;O2/24:1	-0.537977	4.7299549
Cer 42:3;O2|Cer 18:1;O2/24:2	0.35229271	1.50381652
Cer 42:3;O2|Cer 18:1;O2/24:2	-0.3698144	2.6894613
Cer 44:2;O2|Cer 20:1;O2/24:1	0.29951176	0.69389936
DG 30:0|DG 14:0_16:0	0.1195261	0.6133315
DG 32:0|DG 16:0_16:0	-0.2160543	0.58986181
DG 32:1|DG 14:0_18:1	-0.3782035	3.86623982
DG 33:0|DG 16:0_17:0	0.02690262	0.08994756
DG 33:1|DG 16:0_17:1	-0.5708432	3.43603039
DG 34:0|DG 16:0_18:0	-0.0683496	0.16208566
DG 34:1|DG 16:0_18:1	-0.2493912	3.49171176
DG 34:2|DG 16:1_18:1	-0.439459	3.91323712
DG 35:0|DG 17:0_18:0	-0.1049614	0.26078554
DG 35:1|DG 17:0_18:1	-0.4741873	3.82710868
DG 36:0|DG 18:0_18:0	-0.0734532	0.14840364
DG 36:1|DG 18:0_18:1	-0.4345738	3.30206467
DG 36:3|DG 18:0_18:3	-0.4011266	2.65149351
DG 36:4|DG 18:2_18:2	-0.9936172	2.34424829
DG 36:5|DG 16:0_20:5	-0.1690749	0.60215232
DG 36:5|DG 16:1_20:4	-0.4130083	2.5405337
DG 36:6|DG 18:3_18:3	-0.2674857	0.72336587
DG 37:0|DG 16:0_21:0	-0.2344493	1.0236296
DG 37:1|DG 19:0_18:1	-0.4970306	2.49602995
DG 37:2|DG 18:1_19:1	-0.7437312	3.24501917
DG 37:4|DG 17:0_20:4	-0.3135587	3.43246575
DG 38:0|DG 18:0_20:0	-0.2903852	1.29662844
DG 38:1|DG 20:0_18:1	-0.5815158	1.45700679
DG 38:2|DG 18:1_20:1	-0.7343862	3.97840143
DG 38:3|DG 18:0_20:3	-0.5091661	4.28934034
DG 38:3|DG 18:0_20:3	-0.3802136	2.51978788
DG 38:4|DG 18:1_20:3	-0.5307306	6.24021075
DG 38:6|DG 16:0_22:6	0.44690487	2.15537226

DG 39:0|DG 16:0_23:0	-0.5177842	3.32429342
DG 39:1|DG 21:0_18:1	-0.6344943	1.49344426
DG 39:2|DG 16:1_23:1	-0.7091692	2.4088415
DG 40:0|DG 16:0_24:0	-0.4454049	2.5550695
DG 40:1|DG 22:0_18:1	-0.668601	1.59489242
DG 40:2|DG 18:1_22:1	-0.700751	1.61477431
DG 40:4|DG 18:0_22:4	-0.4245967	3.53770089
DG 40:5|DG 20:1_20:4	-0.5176086	5.08284648
DG 40:6|DG 18:0_22:6	-0.418814	2.03452194
DG 41:0|DG 16:0_25:0	-0.6796972	1.60876668
DG 41:1|DG 23:0_18:1	-0.7136421	1.79526853
DG 41:2|DG 18:1_23:1	-0.8946134	3.60282595
DG 42:1|DG 24:0_18:1	-0.7884754	1.79975913
DG 42:2|DG 18:1_24:1	-0.8083668	1.58367247
DG 42:3|DG 18:1_24:2	-0.6453804	1.39719376
DG 42:4|DG 18:0_24:4	-0.4817213	2.09033639
DG 42:7|DG 18:1_24:6	-0.0774779	0.12610462
DG 43:1|DG 25:0_18:1	-0.9366323	2.55285715
DG 44:1|DG 26:0_18:1	-0.8756889	1.84943152
DG 44:2|DG 20:1_24:1	-0.8801373	1.84369984
DG O-36:2|DG O-19:1_17:1	-0.4169567	0.69726589
DG O-38:7|DG O-16:1_22:6	-0.28497	2.79028646
DG O-40:5|DG O-18:1_22:4	-0.4710042	2.20844434
DG O-40:7|DG O-18:1_22:6	0.04014149	0.55030073
DG O-40:8|DG O-18:2_22:6	-0.389377	3.33710945
LPC O-18:1	0.46130519	3.24421141
LPC O-18:2	-0.182808	1.33481036
LPE O-16:0	0.47885719	2.50612536
LPE O-20:4	-0.02892	0.10024379
LPE P-16:1	0.20544667	4.02413079
LPE P-18:1	0.01483794	0.13714633
LPE P-18:2	0.17090535	4.21382998
LPE P-18:2	-0.1515113	3.16897639
LPE P-18:2	-0.1511189	3.02007885
LPE P-18:3	0.14615708	1.21390278
PC O-30:0|PC O-16:0_14:0	-0.033573	0.60473717
PC O-32:0|PC O-16:0_16:0	0.44820414	3.45012763
PC O-32:1|PC O-16:0_16:1	-0.0922569	2.16602693
PC O-32:1|PC O-16:1_16:0	0.37384453	3.37623794
PC O-34:1|PC O-16:0_18:1	0.19601469	2.10895682
PC O-34:1|PC O-18:1_16:0	0.45164636	3.50865175
PC O-34:2|PC O-16:1_18:1	-0.249013	3.48293316
PC O-35:6|PC O-16:2_19:4	0.62027148	1.17669141
PC O-36:0|PC O-20:0_16:0	0.43910782	2.83471502
PC O-36:1|PC O-16:1_20:0	0.01103772	0.04746956
PC O-36:1|PC O-18:0_18:1	-0.2674878	3.56144223
PC O-36:1|PC O-18:1_18:0	-0.1087152	0.38096121
PC O-36:2|PC O-18:1_18:1	-0.1213549	0.43986967

PC O-36:2|PC O-18:1_18:1	-0.1847614	1.60651746
PC O-36:3|PC O-18:3_18:0	-0.1455387	0.64949957
PC O-38:2|PC O-18:1_20:1	-0.3108137	1.31439243
PC O-38:3|PC O-20:3_18:0	-0.4783098	4.16782695
PC O-38:4|PC O-16:0_22:4	0.24112222	2.75400414
PC O-38:5|PC O-18:1_20:4	0.30018422	2.16201801
PC O-38:5|PC O-18:1_20:4	0.1518579	4.3125679
PC O-40:5|PC O-18:0_22:5	0.46377872	2.67797996
PC O-40:6|PC O-18:0_22:6	0.32387143	3.26717672
PC O-40:7|PC O-18:1_22:6	0.39829515	3.71414011
HexCer 40:0;O4|HexCer 18:0;O3/22:0(2OH)	-0.1051937	0.34864892
HexCer 42:0;O4|HexCer 18:0;O3/24:0(2OH)	-0.2403789	1.50792553
HexCer 39:2;O3|HexCer 18:1;O2/21:1;O	-0.2764414	2.289091
HexCer 34:1;O2|HexCer 18:1;O2/16:0	-0.4162704	2.51461805
HexCer 36:1;O2|HexCer 18:1;O2/18:0	-0.5036361	3.49692706
HexCer 36:1;O2|HexCer 18:1;O2/18:0	-1.0925574	2.5219483
HexCer 36:2;O2|HexCer 18:1;O2/18:1	-0.2108755	1.26351661
HexCer 36:2;O2|HexCer 18:2;O2/18:0	-0.5629855	2.82057231
HexCer 38:1;O2|HexCer 18:1;O2/20:0	-0.2717119	1.852199
HexCer 38:2;O2|HexCer 18:1;O2/20:1	-0.2480888	1.46759372
HexCer 39:1;O2|HexCer 18:1;O2/21:0	-0.2028921	0.89089229
HexCer 39:2;O2|HexCer 18:1;O2/21:1	-0.1665821	0.74175424
HexCer 40:1;O2|HexCer 18:1;O2/22:0	-0.6260686	2.88972178
HexCer 40:2;O2|HexCer 18:1;O2/22:1	-1.6805542	3.78041909
HexCer 40:2;O2|HexCer 18:1;O2/22:1	-0.2978465	2.36321927
HexCer 40:2;O2|HexCer 18:1;O2/22:1	-0.6459905	3.56439496
HexCer 41:1;O2|HexCer 18:1;O2/23:0	-0.3151081	1.84667474
HexCer 41:1;O2|HexCer 18:1;O2/23:0	-0.8342079	3.13031602
HexCer 41:2;O2|HexCer 18:1;O2/23:1	-0.2463656	1.9040562
HexCer 41:2;O2|HexCer 18:1;O2/23:1	-0.3319395	2.36067246
HexCer 42:1;O2|HexCer 18:1;O2/24:0	-0.4320055	2.98999945
HexCer 42:2;O2|HexCer 18:1;O2/24:1	-0.3567365	2.7658936
HexCer 42:2;O2|HexCer 18:1;O2/24:1	-0.6969919	4.51792856
HexCer 42:2;O2|HexCer 18:1;O2/24:1	-0.4761885	4.10552436
HexCer 42:3;O2|HexCer 18:1;O2/24:2	-0.3858079	2.94909712
HexCer 42:3;O2|HexCer 18:1;O2/24:2	-1.2383965	2.07046437
HexCer 42:4;O2|HexCer 18:2;O2/24:2	-0.4262863	2.71309084
HexCer 43:2;O2|HexCer 18:1;O2/25:1	-0.3110384	1.8573209
HexCer 44:1;O2|HexCer 18:1;O2/26:0	-0.6090964	1.71957029
HexCer 44:2;O2|HexCer 18:1;O2/26:1	-0.4897618	2.79466727
HexCer 44:2;O2|HexCer 20:1;O2/24:1	-0.4504438	1.72131174
HexCer 44:3;O2|HexCer 18:1;O2/26:2	-0.3254143	1.36048448
LPC 14:0/0:0	-0.0830262	1.43750896
LPC 16:0	0.26803503	4.52502412
LPC 16:0/0:0	0.10535215	0.96704864
LPC 16:1	0.76926119	5.50810284
LPC 16:1	0.45229179	2.85500796
LPC 16:1/0:0	0.19466443	1.96568465

LPC 17:0/0:0	-0.0265526	0.63654007
LPC 18:0	-0.2146281	1.65884556
LPC 18:0/0:0	0.02639246	0.35773571
LPC 18:1	0.40796399	6.11379383
LPC 18:1/0:0	0.14467216	0.80968825
LPC 18:1/0:0	0.06369739	0.41707267
LPC 18:2	0.35195881	1.49528477
LPC 18:2/0:0	0.08840372	1.38470708
LPC 19:0/0:0	-0.2577679	2.96168111
LPC 20:0	-0.7284907	4.06477864
LPC 20:0/0:0	-0.0005616	0.00318573
LPC 20:0/0:0	-0.413503	4.92905145
LPC 20:1	0.09675429	1.51107861
LPC 20:1/0:0	-0.0271552	0.20919386
LPC 20:2	0.46596701	2.94533686
LPC 20:2/0:0	0.17387729	1.47548275
LPC 20:3/0:0	0.08493565	1.51771821
LPC 20:4	0.69950195	4.4328701
LPC 20:4/0:0	0.2313141	1.33001197
LPC 22:1/0:0	-0.3273015	3.54749361
LPC 22:4/0:0	0.2038478	2.1376896
LPC 22:5	0.52892687	2.49383661
LPC 22:5	0.67458373	2.75182959
LPC 22:5/0:0	0.22160088	1.42399266
LPC 22:5/0:0	0.22495839	0.92585968
LPC 22:6	0.6818555	5.88068941
LPC 22:6/0:0	0.54118463	2.50870487
LPC 23:0/0:0	-0.5348519	4.22450459
LPC 24:0/0:0	-0.5519683	2.94957155
LPC 24:1	-0.5172803	3.73090308
LPC 24:4/0:0	0.33100644	1.25893916
LPC 24:6/0:0	0.36524686	1.31362376
LPC 25:0/0:0	-1.9547777	3.10533609
LPC 26:1/0:0	-0.6111399	2.13195058
LPE 16:0	0.07390081	1.81085343
LPE 16:1	0.17417227	1.65795399
LPE 17:0	0.18252487	1.68904875
LPE 18:0	0.21836743	4.28364381
LPE 18:0	-0.2363148	1.990808
LPE 18:1	-0.0071273	0.09819892
LPE 18:1	-0.3297331	4.07451561
LPE 18:2	0.22135085	2.68533237
LPE 18:2	0.49957822	2.07479498
LPE 19:1	-0.518249	1.68353426
LPE 20:1	-0.8212962	4.86283019
LPE 20:1	-1.1217858	4.06610647
LPE 20:4	0.53513349	4.33619795
LPE 20:4	0.1394462	0.94419666

LPE 22:4	-0.084578	0.79774422
LPE 22:4	0.02491531	0.42719928
LPE 22:5	0.29903417	0.92818547
LPE 22:6	0.37124176	1.95277178
LPE 22:6	0.77593495	4.73212117
LPE 24:6	0.00908777	0.09877377
PC 32:0|PC 16:0_16:0	0.10485405	1.3055536
PC 32:1|PC 16:0_16:1	0.1220469	2.38090944
PC 32:1|PC 16:0_16:1	0.12388465	1.89831127
PC 32:2|PC 16:1_16:1	0.61070432	2.40554281
PC 34:0|PC 16:0_18:0	0.34767507	3.14581585
PC 34:1|PC 16:0_18:1	0.03058263	0.12089579
PC 34:1|PC 16:0_18:1	-0.102176	0.20946855
PC 34:2|PC 16:0_18:2	0.17581193	2.90122259
PC 34:2|PC 16:1_18:1	0.02691012	0.28288664
PC 34:3|PC 16:0_18:3	0.20795118	1.88346792
PC 34:4|PC 14:0_20:4	0.58791939	2.9176287
PC 35:4|PC 15:0_20:4	0.48301889	0.62855158
PC 36:1|PC 18:0_18:1	-0.010058	0.1038874
PC 36:2|PC 18:0_18:2	0.09541407	1.26900811
PC 36:2|PC 18:1_18:1	0.01258388	0.14628794
PC 36:3|PC 16:0_20:3	0.39707175	2.89044942
PC 36:3|PC 16:0_20:3	0.22827553	2.63352592
PC 36:3|PC 16:0_20:3	0.21201503	4.10020002
PC 36:4|PC 16:0_20:4	0.15802852	3.17704288
PC 36:4|PC 18:2_18:2	0.44026167	1.77057532
PC 36:5|PC 16:0_20:5	0.70812781	2.94869186
PC 36:5|PC 16:1_20:4	0.73083172	2.94280871
PC 36:6|PC 14:0_22:6	0.76902023	3.16398688
PC 37:2|PC 18:1_19:1	0.04671356	0.45518361
PC 38:2|PC 18:1_20:1	-0.1096098	1.07011967
PC 38:3|PC 18:0_20:3	0.2696243	3.07253265
PC 38:3|PC 18:0_20:3	0.29655631	2.80108726
PC 38:4|PC 18:0_20:4	0.10483421	1.67852684
PC 38:4|PC 18:1_20:3	0.17269054	0.62577204
PC 38:5|PC 18:1_20:4	0.10504925	1.82951496
PC 38:6|PC 18:2_20:4	0.5415315	3.0834297
PC 38:7|PC 16:1_22:6	0.76681839	3.50042739
PC 39:1|PC 21:0_18:1	-0.1081802	0.8876313
PC 39:4|PC 17:0_22:4	0.37621028	3.37472272
PC 39:4|PC 19:0_20:4	0.28456779	2.1559069
PC 39:5|PC 19:1_20:4	0.24056624	2.01555165
PC 39:6|PC 17:0_22:6	0.31274416	4.85658614
PC 40:0|PC 16:0_24:0	-0.4197319	1.20618432
PC 40:2|PC 20:1_20:1	-0.2227414	3.00661918
PC 40:5|PC 18:0_22:5	0.22048729	2.43547702
PC 40:6|PC 16:0_24:6	0.28276738	2.72269838
PC 40:6|PC 20:2_20:4	0.37059606	5.1039968

PC 40:7|PC 18:1_22:6	0.30825758	2.52932574
PC 40:8|PC 18:2_22:6	0.88017385	2.6911795
PC 41:1|PC 23:0_18:1	-0.4423304	1.0219957
PC 41:6|PC 19:0_22:6	0.43488635	3.64164032
PC 42:1|PC 24:0_18:1	-0.4416072	1.68445867
PC 42:10|PC 20:4_22:6	0.80475936	3.40038795
PC 42:4|PC 22:0_20:4	-0.1073841	2.91676952
PC 42:6|PC 18:0_24:6	0.38166199	2.39851407
PC 42:7|PC 20:1_22:6	0.30860078	3.23289053
PC 42:9|PC 20:4_22:5	0.65721921	1.77090946
PC 43:1|PC 25:0_18:1	-0.6343157	1.49085706
PC 43:2|PC 18:1_25:1	-0.3832532	0.90091498
PC 44:11|PC 22:5_22:6	0.73075378	1.62068349
PC 44:5|PC 24:1_20:4	-0.1705641	3.6972124
SHexCer 36:1;O3|SHexCer 18:1;O2/18:0;O	-0.1570469	1.43305964
SHexCer 38:1;O3|SHexCer 18:1;O2/20:0;O	-0.3155718	1.10318895
SHexCer 38:2;O3|SHexCer 18:2;O2/20:0;O	-0.2428408	0.45949483
SHexCer 40:1;O3|SHexCer 18:1;O2/22:0;O	-0.4365825	1.98631113
SHexCer 40:2;O3|SHexCer 18:1;O2/22:1;O	-0.5339833	3.35202209
SHexCer 41:0;O3|SHexCer 18:0;O2/23:0;O	-0.512219	2.01145193
SHexCer 41:1;O3|SHexCer 18:1;O2/23:0;O	-0.5001664	2.134275
SHexCer 41:2;O3|SHexCer 18:1;O2/23:1;O	-0.7758919	3.49881663
SHexCer 42:1;O3|SHexCer 18:1;O2/24:0;O	-2.0964709	2.42236046
SHexCer 42:1;O3|SHexCer 18:1;O2/24:0;O	-0.4419644	2.97166818
SHexCer 42:2;O3|SHexCer 18:1;O2/24:1;O	-0.8437088	2.22057772
SHexCer 42:3;O3|SHexCer 18:2;O2/24:1;O	-0.4467475	3.13482174
SHexCer 43:1;O3|SHexCer 18:1;O2/25:0;O	-0.2335701	1.09326056
SHexCer 43:2;O3|SHexCer 18:1;O2/25:1;O	-0.6596024	1.73438893
SHexCer 44:2;O3|SHexCer 18:1;O2/26:1;O	-0.6426759	3.11892754
SM 26:1;O3	-0.5433714	3.73225382
SM 29:2;O3	-0.2131742	0.89271841
SM 34:2;O3	-0.4587767	1.02228436
SM 44:3;O2|SM 18:1;O2/26:2	0.30538081	2.23447121
TG 48:1|TG 16:0_16:0_16:1	0.12589365	2.92954487
TG 48:2|TG 14:0_16:1_18:1	-0.0339173	0.08663147
TG 49:0|TG 16:0_16:0_17:0	-0.303441	0.64134678
TG 49:3|TG 15:0_16:1_18:2	-0.3123339	0.50276568
TG 50:0|TG 16:0_16:0_18:0	0.24496381	1.36605499
TG 50:1|TG 16:0_16:0_18:1	0.21086448	3.06703744
TG 50:2|TG 16:0_16:1_18:1	0.06852238	0.97065621
TG 50:3|TG 16:1_16:1_18:1	-0.0593867	0.35886494
TG 50:4|TG 16:0_18:1_16:3	0.20028811	1.62351522
TG 51:0|TG 16:0_17:0_18:0	-0.5670403	0.8843658
TG 52:0|TG 16:0_18:0_18:0	0.197461	1.12337676
TG 52:1|TG 16:0_18:0_18:1	0.21999834	2.4140856
TG 52:2|TG 16:0_18:1_18:1	0.05709454	1.024029
TG 52:3|TG 16:0_18:1_18:2	-0.0320253	0.24770701
TG 52:4|TG 16:1_18:1_18:2	-0.0393536	0.18441532

TG 52:5|TG 16:1_18:2_18:2	-0.2689461	1.55433135
TG 52:6|TG 14:0_16:0_22:6	0.42095821	4.34697709
TG 52:6|TG 16:1_18:2_18:3	-0.1100955	1.34826352
TG 53:0|TG 16:0_18:0_19:0	-0.1413864	0.55602422
TG 53:1|TG 16:0_18:0_19:1	0.00847493	0.08723534
TG 53:2|TG 16:0_18:1_19:1	-0.0987155	0.73567799
TG 53:4|TG 17:0_18:2_18:2	-0.2271372	1.0682667
TG 54:0|TG 16:0_18:0_20:0	-0.148669	0.68455443
TG 54:1|TG 16:0_18:0_20:1	0.06690482	0.55380951
TG 54:2|TG 16:0_18:1_20:1	-0.0159264	0.2300558
TG 54:3|TG 18:0_18:1_18:2	-0.2253273	1.74309712
TG 54:5|TG 18:1_18:2_18:2	-0.2643728	1.77342953
TG 54:6|TG 16:0_16:0_22:6	0.31176234	3.65469819
TG 54:6|TG 18:1_18:2_18:3	-0.266332	1.63877208
TG 54:7|TG 18:2_18:2_18:3	-0.4122479	1.94306892
TG 54:8|TG 18:2_18:3_18:3	-0.3401383	1.17789272
TG 55:1|TG 16:0_21:0_18:1	-0.0877354	0.74963926
TG 55:2|TG 16:0_18:1_21:1	-0.1018622	0.60077461
TG 56:0|TG 14:0_18:0_24:0	-0.2918078	1.67171561
TG 56:0|TG 15:0_15:0_26:0	-0.5453621	1.50543806
TG 56:1|TG 16:0_16:0_24:1	-0.0783411	0.56851675
TG 56:10|TG 14:0_20:4_22:6	0.76215894	3.64178555
TG 56:2|TG 16:0_18:1_22:1	-0.2052579	0.67047227
TG 56:2|TG 18:0_18:1_20:1	-0.0707576	0.96684861
TG 56:3|TG 18:0_18:0_20:3	0.08865545	1.1745883
TG 56:4|TG 16:0_18:0_22:4	0.22043941	2.61258977
TG 56:6|TG 16:0_18:1_22:5	0.22448689	2.22752413
TG 56:7|TG 16:0_18:1_22:6	0.30390859	3.89258843
TG 57:0|TG 16:0_18:0_23:0	-0.392976	1.55952437
TG 57:1|TG 16:0_23:0_18:1	-0.1125144	1.41022024
TG 58:0|TG 16:0_18:0_24:0	-0.3374768	2.24920087
TG 58:1|TG 16:0_18:0_24:1	-0.1306393	0.89697333
TG 58:2|TG 16:0_18:1_24:1	-0.1485016	2.16059777
TG 58:3|TG 18:1_18:1_22:1	-0.1530977	2.81151675
TG 58:4|TG 18:0_18:0_22:4	0.3336961	2.62198964
TG 58:6|TG 18:0_18:0_22:6	0.22689794	3.66611315
TG 58:7|TG 16:0_20:1_22:6	0.32508941	4.17211686
TG 58:8|TG 18:1_18:1_22:6	0.30634611	4.45798142
TG 59:3|TG 18:1_18:1_23:1	-0.0154758	0.19613425
TG 60:0|TG 16:0_20:0_24:0	-0.2168563	0.43684729
TG 60:2|TG 18:0_18:1_24:1	-0.1390624	1.30176133
TG 60:3|TG 18:1_18:1_24:1	-0.1877828	2.7899921
TG 60:7|TG 16:0_22:1_22:6	0.26658927	1.89371896
TG 61:3|TG 18:1_18:1_25:1	0.0522853	0.19164239
TG 62:12|TG 18:0_22:6_22:6	0.35298958	3.59554232
TG 62:3|TG 18:1_20:1_24:1	-0.5128156	1.17767457
CL 68:7|CL 16:1_16:1_16:1_20:4	1.90514166	3.30317118
CL 68:4|CL 16:0_18:2_16:1_18:1	0.62777595	4.36990286

CL 68:3|CL 16:0_18:1_16:1_18:1	0.5059796	2.59433676
CL 68:2|CL 16:0_18:1_18:0_16:1	0.90200587	2.33667138
CL 68:2|CL 16:0_18:1_16:0_18:1	0.52690697	1.95970019
CL 69:4|CL 16:1_18:1_17:1_18:1	1.68983546	2.9050019
CL 70:8|CL 16:1_18:2_16:1_20:4	0.84169524	3.06394695
CL 70:6|CL 16:0_18:1_16:1_20:4	0.56488341	3.2805612
CL 70:5|CL 16:1_18:1_18:1_18:2	0.60038709	3.40091235
CL 70:4|CL 18:0_18:2_16:1_18:1	0.56911344	3.13261429
CL 70:4|CL 16:1_18:1_18:1_18:1	0.5069596	2.93200886
CL 70:3|CL 16:0_18:1_18:1_18:1	0.34753563	1.65744957
CL 71:5|CL 17:1_18:1_18:1_18:2	1.35231569	3.38667292
CL 72:10|CL 16:1_20:4_16:1_20:4	0.57643755	3.96165286
CL 72:9|CL 16:0_20:4_16:1_20:4	0.78027934	2.5342089
CL 72:8|CL 16:1_18:1_18:2_20:4	0.57292032	4.57603057
CL 72:7|CL 16:0_18:2_18:1_20:4	0.53157716	3.359482
CL 72:6|CL 18:1_18:2_18:1_18:2	0.60042888	3.75092702
CL 72:5|CL 18:1_18:1_18:1_18:2	0.55537355	3.12620089
CL 72:4|CL 18:1_18:1_18:1_18:1	0.40130771	2.47054688
CL 73:7|CL 17:1_18:1_18:1_20:4	0.70704366	3.63040968
CL 74:12|CL 16:1_20:4_16:1_22:6	0.89625546	3.79235221
CL 74:11|CL 16:1_20:4_18:2_20:4	0.65356499	5.22421025
CL 74:10|CL 16:1_20:4_18:1_20:4	0.51550172	3.82970212
CL 74:9|CL 16:0_18:2_18:1_22:6	0.19501685	0.67206958
CL 74:9|CL 16:1_18:1_20:3_20:4	0.53884615	4.87950918
CL 74:8|CL 18:1_18:2_18:1_20:4	0.51987452	3.63601433
CL 74:8|CL 18:1_18:1_18:2_20:4	0.54070614	1.63141105
CL 74:7|CL 18:1_18:2_18:1_20:3	0.4722069	2.91572028
CL 74:7|CL 18:1_18:1_18:1_20:4	0.43862545	2.93092336
CL 74:7|CL 18:0_18:2_18:1_20:4	0.43045141	2.57366857
CL 75:10|CL 17:1_20:4_18:1_20:4	0.95692253	3.70089112
CL 76:13|CL 16:1_20:4_18:2_22:6	0.70446558	4.11166714
CL 76:12|CL 16:1_20:4_18:1_22:6	0.59478543	2.33978856
CL 76:11|CL 18:1_20:4_18:2_20:4	0.60830554	4.13652312
CL 76:10|CL 18:1_20:4_18:2_20:3	0.51293646	3.94135464
CL 76:9|CL 18:0_18:2_20:3_20:4	0.29549159	2.20872045
CL 78:15|CL 16:1_20:4_20:4_22:6	0.52571888	3.18126643
CL 78:13|CL 18:1_20:4_18:2_22:6	0.48507649	4.26242261
CL 78:12|CL 18:1_20:4_18:1_22:6	0.49623789	3.96773545
CL 80:15|CL 18:1_20:4_20:4_22:6	0.53222329	3.72659432
CL 80:14|CL 18:1_22:6_18:1_22:6	0.44934258	3.14224913
CL 82:18|CL 18:2_22:6_20:4_22:6	0.96860742	2.2472819
CL 82:14|CL 18:1_22:6_20:3_22:4	0.82877563	4.04987462
CL 84:20|CL 20:4_22:6_20:4_22:6	0.87863475	2.21623742
CL 84:19|CL 18:1_22:6_22:6_22:6	0.57459765	3.62750151
LPG O-20:2	-0.3978109	1.00348921
PE O-32:2|PE O-18:2_14:0	-1.2923587	4.67638995
PE O-32:1|PE O-16:1_16:0	0.13906673	1.30432374
PE O-32:1|PE O-16:0_16:1	0.06156537	0.19619638

PE O-32:0|PE O-16:0_16:0	0.38391301	1.96875851
PE O-33:1|PE O-17:1_16:0	0.15019829	0.69813464
PE O-34:5|PE O-14:1_20:4	0.87618963	2.45229181
PE O-34:3|PE O-16:1_18:2	-0.3183252	2.2014668
PE O-34:2|PE O-16:1_18:1	-0.5671757	3.63131714
PE O-34:1|PE O-16:0_18:1	-0.1190128	1.35362271
PE O-34:0|PE O-18:0_16:0	0.32012484	1.91320954
PE O-35:3|PE O-18:2_17:1	-0.6079996	5.01910216
PE O-35:1|PE O-17:0_18:1	-0.4433437	2.19857351
PE O-36:6|PE O-16:1_20:5	-0.0731753	1.36950053
PE O-36:5|PE O-16:1_20:4	-0.2491398	1.20641237
PE O-36:4|PE O-16:0_20:4	-0.1880535	1.70850988
PE O-36:4|PE O-16:1_20:3	-0.3182198	2.89067345
PE O-36:3|PE O-18:2_18:1	-0.7227776	3.69274691
PE O-36:2|PE O-18:1_18:1	-0.3674145	2.85914084
PE O-36:0|PE O-20:0_16:0	-0.4734754	3.22657066
PE O-37:6|PE O-17:2_20:4	-0.2211441	3.01458388
PE O-37:5|PE O-17:1_20:4	-0.1441969	0.9954714
PE O-37:4|PE O-17:1_20:3	-0.6433342	2.28516793
PE O-37:3|PE O-18:2_19:1	-0.6523292	2.89195989
PE O-37:2|PE O-17:1_20:1	-0.5920603	2.21707563
PE O-38:8|PE O-16:2_22:6	0.35245377	1.52571626
PE O-38:7|PE O-16:1_22:6	0.14313897	2.76234023
PE O-38:6|PE O-20:5_18:1	0.44026591	2.8022405
PE O-38:6|PE O-18:2_20:4	-0.3579614	2.76857763
PE O-38:5|PE O-18:1_20:4	0.00126294	0.03408623
PE O-38:5|PE O-16:1_22:4	-0.1331699	2.91025129
PE O-38:5|PE O-18:2_20:3	-0.4605017	3.76552284
PE O-38:4|PE O-18:1_20:3	-0.200682	1.24466964
PE O-38:4|PE O-16:0_22:4	0.10944869	0.9614906
PE O-38:4|PE O-18:2_20:2	-0.2791159	4.45941647
PE O-38:4|PE O-18:1_20:3	-0.2848125	2.25113164
PE O-38:3|PE O-18:2_20:1	-0.5113021	3.19073051
PE O-38:2|PE O-18:1_20:1	-0.5369643	3.14898263
PE O-38:2|PE O-18:1_20:1	-0.52074	1.8991176
PE O-39:8|PE O-17:2_22:6	0.71303678	2.06766886
PE O-38:1|PE O-18:1_20:0	-0.5515013	1.86345897
PE O-38:1|PE O-18:1_20:0	-0.5440695	1.48264974
PE O-39:7|PE O-17:1_22:6	0.04979526	0.89263253
PE O-38:0|PE O-18:0_20:0	-0.4269468	1.30278081
PE O-39:6|PE O-17:0_22:6	-0.2179601	2.16255975
PE O-39:3|PE O-18:2_21:1	-0.5626971	2.64093254
PE O-40:9|PE O-20:5_20:4	0.31367807	1.70204751
PE O-40:9|PE O-18:3_22:6	0.39692774	2.5397264
PE O-39:2|PE O-18:1_21:1	-0.5205572	1.47370486
PE O-40:8|PE O-18:2_22:6	0.3535758	1.71658802
PE O-40:8|PE O-18:2_22:6	0.12134448	2.31634896
PE O-40:7|PE O-18:1_22:6	0.08915376	2.91701422

PE O-40:7|PE O-18:2_22:5	-0.003575	0.01258996
PE O-40:6|PE O-18:2_22:4	-0.2462516	4.05886525
PE O-40:6|PE O-18:0_22:6	-0.0579156	0.60057693
PE O-40:5|PE O-18:1_22:4	0.01454255	0.09941373
PE O-40:4|PE O-18:1_22:3	-0.1166395	1.04340635
PE O-40:4|PE O-18:0_22:4	0.20204657	1.59671731
PE O-40:3|PE O-20:2_20:1	-0.5117374	1.99783674
PE O-40:2|PE O-18:1_22:1	-0.5425104	1.32500626
PE O-41:6|PE O-21:3_20:3	-0.1647188	1.67942881
PE O-42:10|PE O-20:4_22:6	-0.1614211	0.16940659
PE O-41:3|PE O-18:2_23:1	-0.3411462	1.60713694
PE O-42:9|PE O-20:3_22:6	-0.4658955	0.65069533
PE O-41:2|PE O-18:1_23:1	-0.5622101	1.16789046
PE O-42:8|PE O-18:2_24:6	-0.4771539	2.55458451
PE O-42:7|PE O-18:1_24:6	0.00693398	0.06849341
PE O-42:7|PE O-18:1_24:6	0.25756301	2.10313773
PE O-42:6|PE O-18:1_24:5	-0.2444443	1.06017944
PE O-42:5|PE O-18:1_24:4	0.1468321	1.15985575
PE O-42:5|PE O-20:1_22:4	0.04490614	0.27016097
PE O-42:4|PE O-18:2_24:2	0.02663586	0.13206468
PE O-42:3|PE O-22:2_20:1	-0.5824304	1.41217738
PE O-42:2|PE O-18:1_24:1	-0.613734	1.06309219
PG O-38:7|PG O-16:1_22:6	0.71420422	4.18160151
PI O-36:4|PI O-16:0_20:4	0.27476891	3.25459006
PI O-38:6|PI O-16:0_22:6	0.37864774	3.80317859
PI O-38:5|PI O-18:1_20:4	0.19952632	3.55075931
PI O-38:4|PI O-18:0_20:4	-0.3844624	0.82694856
PI O-40:7|PI O-18:1_22:6	0.45249242	4.14198735
PI O-40:6|PI O-18:0_22:6	0.30898639	2.02431966
LPG 16:1	0.46504913	1.79474554
LPG 16:0	0.5506356	2.13804629
LPG 18:2	0.21642329	0.93792039
LPG 18:2	0.26563225	2.87558069
LPG 18:1	0.09611401	0.65652256
LPG 18:1	0.41823616	3.62748335
LPG 18:0	0.11103106	0.94879204
LPG 18:0	0.01192586	0.07542115
LPG 20:4	0.45438817	5.23249864
LPG 20:4	0.06339274	0.47122117
LPG 20:3	0.57818366	2.42940969
LPG 20:3	-0.2722047	0.61716327
LPG 20:3	0.47894896	3.47198646
LPG 20:1	0.02746747	0.36680993
LPG 22:6	0.14429606	1.45163282
LPG 22:5	0.50750228	2.08732812
LPG 22:4	0.29511834	1.88569865
LPG 22:4	0.39998985	3.43694418
LPI 16:0	0.26621293	2.72685927

LPI 18:1	0.42945325	2.93389377
LPI 18:0	0.21677094	3.12586197
LPI 18:0	-0.1067121	0.52473177
LPI 20:4	0.6901454	3.590572
LPI 20:4	0.39546143	1.77763409
LPI 22:6	1.57914274	1.98062276
LPI 22:6	0.97065752	3.42073409
PE 22:0;O|PE 18:0_4:0;O	0.83112767	3.10282631
PE 24:1;O|PE 18:1_6:0;O	0.64456517	2.01827959
PE 34:2;O|PE 16:0_18:2;O	0.64210567	1.2228366
PE 34:1;O|PE 16:0_18:1;O	0.96137481	1.33076131
PE 36:5;O|PE 16:0_20:5;O	0.65207963	2.78358492
PE 36:5;O|PE 16:1_20:4;O	1.30467597	2.46455113
PE 36:5;O|PE 16:1_20:4;O	1.29260264	1.57066604
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PE 36:4;O|PE 16:0_20:4;O	0.86064986	2.61345631
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PE 36:4;O|PE 16:0_20:4;O	0.74528668	2.57918604
PE 36:4;O|PE 16:0_20:4;O	0.81389626	2.9313222
PE 36:3;O|PE 18:1_18:2;O	0.95723172	2.15941914
PE 36:2;O|PE 18:1_18:1;O	0.12351791	0.85820834
PE 36:2;O|PE 18:1_18:1;O	0.14994091	1.3925408
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PE 37:5;O|PE 22:5_15:0;O	0.96492092	2.91404708
PE 37:4;O|PE 17:0_20:4;O	1.20138712	3.58222954
PE 36:4;O2|PE 16:0_20:4;O2	1.29456522	2.55209186
PE 36:4;O2|PE 16:0_20:4;O2	0.95394551	2.7383935
PE 36:2;O2|PE 18:1_18:1;O2	0.94237141	2.56575032
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PE 38:6;O|PE 16:0_22:6;O	0.75560794	2.44315668
PE 38:6;O|PE 16:0_22:6;O	0.6460415	3.08364858
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PE 38:4;O|PE 18:1_20:3;O	0.75748739	3.04279386

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PE 42:8;O|PE 22:4_20:4;O	1.63680297	2.85498875
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PE 44:10;O2|PE 22:6_22:4;O2	1.22841436	2.62876065
PE 44:10;O2|PE 22:4_22:6;O2	2.55603599	3.54545888
PE 44:10;O2|PE 22:4_22:6;O2	2.80738378	3.29014316
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PI 36:4;O|PI 16:0_20:4;O	0.30077287	2.74542827
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PI 38:4;O|PI 18:0_20:4;O	0.15068242	1.12715374
PI 36:4;O3|PI 16:0_20:4;O3	0.35332111	0.86055859
PI 38:4;O2|PI 18:0_20:4;O2	0.11794274	0.60438688
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PI 38:4;O2|PI 18:0_20:4;O2	0.0158578	0.11880638
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PI 40:6;O|PI 18:0_22:6;O	0.21344059	1.52653146
PI 38:5;O3|PI 18:0_20:5;O3	0.00377126	0.01607956
PI 38:5;O3|PI 18:0_20:5;O3	-0.0653629	0.39104166
PI 38:4;O3|PI 18:0_20:4;O3	-0.0065837	0.03201123
PI 38:4;O3|PI 18:0_20:4;O3	0.10650925	0.25687527
PI 38:4;O3|PI 18:0_20:4;O3	0.24302439	1.50913249
PI 38:4;O4|PI 18:0_20:4;O4	0.91966015	3.73628837
PE 32:2|PE 16:1_16:1	0.39617738	2.09864967

PE 34:3|PE 16:1_18:2	0.24362439	2.3101599
PE 34:2|PE 16:0_18:2	-0.0470004	0.84120462
PE 34:2|PE 16:1_18:1	0.19686259	2.37353927
PE 34:1|PE 16:0_18:1	-0.1579044	2.3989894
PE 34:0|PE 16:0_18:0	0.60211402	2.65388682
PE 35:2|PE 17:1_18:1	-0.7008918	2.6096868
PE 36:5|PE 16:0_20:5	0.21469132	3.58831447
PE 36:5|PE 16:1_20:4	0.61063189	2.44142619
PE 36:4|PE 16:0_20:4	0.16664463	2.83360643
PE 36:3|PE 16:0_20:3	0.2976222	2.34895812
PE 36:3|PE 18:1_18:2	-0.0661914	0.74219175
PE 36:2|PE 18:1_18:1	-0.1787752	2.55760961
PE 36:1|PE 18:0_18:1	-0.1278036	1.63505511
PE 36:0|PE 18:0_18:0	0.79539282	2.44001712
PE 37:4|PE 17:0_20:4	0.13196096	1.38764765
PE 37:2|PE 18:1_19:1	-0.4777492	2.98199563
PE 38:7|PE 16:1_22:6	0.52212041	1.68349772
PE 38:7|PE 16:1_22:6	0.69443419	2.81517445
PE 38:7|PE 18:3_20:4	0.8143971	2.1025903
PE 38:6|PE 16:0_22:6	-0.0479375	0.3858447
PE 38:6|PE 18:2_20:4	0.60265918	2.83375799
PE 38:5|PE 18:1_20:4	0.23601794	3.40874332
PE 38:4|PE 18:0_20:4	-0.0402692	0.66491186
PE 38:3|PE 18:0_20:3	0.02788136	0.36522623
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PE 40:8|PE 18:2_22:6	0.53479948	3.08159786
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PE 40:5|PE 18:0_22:5	0.15915669	0.71870889
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PE 42:9|PE 20:3_22:6	0.67416271	3.08434004
PE 42:8|PE 20:4_22:4	0.22694612	1.86971747
PE 42:7|PE 20:1_22:6	-0.6134393	2.9000011
PE 42:5|PE 18:0_24:5	0.18884411	2.122744
PE 42:4|PE 18:0_24:4	0.13920727	1.45739885
PE 42:1|PE 24:0_18:1	-0.6717993	1.47733966
PE 44:12|PE 22:6_22:6	0.64500234	2.61430985
PE 44:10|PE 22:4_22:6	0.34912205	3.46897623
PE 46:12|PE 22:6_24:6	0.58583644	2.8120815
PE 46:10|PE 24:4_22:6	0.63886951	3.36109301
PG 30:0|PG 14:0_16:0	-0.2544435	0.16010937
PG 31:0|PG 15:0_16:0	0.67167355	4.18393982
PG 32:2|PG 16:1_16:1	0.59798233	2.28497105
PG 32:2|PG 16:1_16:1	0.58022516	1.20358363
PG 32:2|PG 16:1_16:1	1.06880931	3.90905534
PG 32:1|PG 16:0_16:1	0.46591554	4.79470924

PG 32:1|PG 14:0_18:1	0.31361897	1.2344111
PG 32:0|PG 16:0_16:0	0.17174097	0.9522139
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PG 33:1|PG 15:0_18:1	0.25809643	0.33409009
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PG 34:4|PG 18:1_16:3	0.13782544	0.26578464
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PG 34:2|PG 16:1_18:1	0.27425328	2.48110117
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PG 34:2|PG 16:1_18:1	0.5806641	4.50022504
PG 34:1|PG 16:0_18:1	0.60160361	4.01790156
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PG 40:8|PG 20:4_20:4	-0.0299947	0.1257317
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PG 40:6|PG 18:1_22:5	0.0649901	0.24718153
PG 40:5|PG 18:1_22:4	0.14074172	0.92789325
PG 42:11|PG 20:5_22:6	0.21781903	1.70744339

PG 42:10|PG 20:4_22:6	0.10580402	0.57114039
PG 42:9|PG 20:4_22:5	0.29639817	1.0920521
PG 42:9|PG 20:3_22:6	0.35950745	2.59601759
PG 42:9|PG 20:4_22:5	0.44031261	1.93126601
PG 42:9|PG 20:3_22:6	0.72893132	3.63128224
PG 42:8|PG 20:4_22:4	0.20884659	1.90046347
PG 42:7|PG 20:1_22:6	0.86752114	2.51409431
PG 44:12|PG 22:6_22:6	0.21592696	1.20285017
PG 44:11|PG 22:5_22:6	0.00251575	0.00498809
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PG 44:11|PG 22:5_22:6	-0.0232395	0.03658708
PG 44:10|PG 22:4_22:6	-0.0857078	0.09315096
PI 32:0|PI 16:0_16:0	0.23536618	2.83113203
PI 34:4|PI 14:0_20:4	0.21980372	2.81775135
PI 34:2|PI 16:1_18:1	0.02736358	0.14071193
PI 34:1|PI 16:0_18:1	0.60293409	1.85119167
PI 34:0|PI 16:0_18:0	-0.2231031	1.32532598
PI 35:4|PI 15:0_20:4	0.24668138	1.94787029
PI 36:5|PI 16:1_20:4	0.22221407	3.69236534
PI 36:4|PI 16:0_20:4	0.03596814	0.56974996
PI 36:3|PI 16:0_20:3	-0.4566773	2.33437737
PI 36:3|PI 16:0_20:3	0.23150896	2.05118373
PI 36:2|PI 18:1_18:1	0.19286895	0.50074906
PI 36:1|PI 18:0_18:1	0.11962801	0.35144644
PI 36:1|PI 18:0_18:1	-0.4693741	2.51371489
PI 37:5|PI 17:1_20:4	0.09645071	2.65350461
PI 37:4|PI 17:0_20:4	0.07352409	2.9544005
PI 38:6|PI 18:2_20:4	0.28621653	3.81697002
PI 38:5|PI 18:1_20:4	0.07280047	1.29893014
PI 38:4|PI 18:0_20:4	0.31610142	3.14847547
PI 38:3|PI 18:0_20:3	0.05214539	1.12921365
PI 39:6|PI 17:0_22:6	0.24348787	2.54806738
PI 39:5|PI 19:1_20:4	-0.3488408	1.08659497
PI 39:4|PI 19:0_20:4	-0.3010873	3.68140657
PI 40:8|PI 20:4_20:4	0.90891381	3.85525439
PI 40:8|PI 20:4_20:4	0.38842275	4.51512582
PI 40:7|PI 20:3_20:4	0.27344815	3.64543023
PI 40:7|PI 18:1_22:6	0.17859977	3.72385985
PI 40:6|PI 18:0_22:6	0.24843013	3.24024002
PI 40:6|PI 20:2_20:4	0.38451865	1.29534562
PI 40:5|PI 20:1_20:4	0.13024112	2.71947627
PI 40:5|PI 18:0_22:5	-0.0425591	0.07422798
PI 40:4|PI 20:0_20:4	0.029717	0.36649703
PI 40:4|PI 18:0_22:4	-0.1716829	1.57379013
PI 42:10|PI 20:4_22:6	0.40201519	4.04200171
PI 42:9|PI 20:4_22:5	0.60680048	3.21327932
PI 42:8|PI 20:4_22:4	0.33810453	4.30634575
PI 44:12|PI 22:6_22:6	0.54555341	3.9999479

PI 44:10|PI 22:4_22:6	0.39267667	1.59164269

Data Description: Fig. S10A - Lipid metabolite fold-change comparison between WT 24-month and PPT1 KO 7-month lipofuscin (n = 3 biological replicates/genotype). AHexCer: acyl-hexosylceramide; Cer: ceramide; CL: cardiolipin; DG: diglyceride (diacylglycerol); EtherDG: ether-linked diglyceride; EtherLPC: ether-linked lysophosphatidylcholine; EtherLPE: ether-linked lysophosphatidylethanolamine; EtherLPG: ether-linked lysophosphatidylglycerol; EtherPC: ether-linked phosphatidylcholine; EtherPE: ether-linked phosphatidylethanolamine; EtherPG: ether-linked phosphatidylglycerol; EtherPI: ether-linked phosphatidylinositol; HexCer: hexosylceramide; LPC: lysophosphatidylcholine; LPE: lysophosphatidylethanolamine; LPG: lysophosphatidylglycerol; LPI: lysophosphatidylinositol; OxPE: oxidized phosphatidylethanolamine; OxPI: oxidized phosphatidylinositol; PC: phosphatidylcholine; PE: phosphatidylethanolamine; PG/BMP: phosphatidylglycerol/bis(monoacylglycero)phosphate; PI: phosphatidylinositol; SHexCer: sulfatide; SM: sphingomyelin; TG: triglyceride (triacylglycerol)

Fig. S10A - Lipofuscin Lipid Metabolite Fold Change - PPT1 KO-7/WT-24		
Lipid Annotation	**$\log_{10}$(PPT1 KO/WT)**	**-$\log_{10}$(p-value)**
AHexCer 52:1;O2|AHexCer (O-16:0)18:1;O2/18:0	-0.061469138	0.09525785
AHexCer 54:1;O2|AHexCer (O-18:0)18:1;O2/18:0	-0.103071283	0.15017409
AHexCer 56:2;O2|AHexCer (O-17:1)18:1;O2/21:0	-0.172847448	0.48288531
AHexCer 57:1;O2|AHexCer (O-16:0)18:1;O2/23:0	-0.209867655	0.4139797
AHexCer 58:1;O2|AHexCer (O-16:0)18:1;O2/24:0	0.070427599	0.09622633
AHexCer 58:2;O2|AHexCer (O-16:0)18:1;O2/24:1	-0.223631191	0.43440717
AHexCer 58:2;O2|AHexCer (O-16:0)18:1;O2/24:1	0.062016441	0.07361264
AHexCer 59:1;O2|AHexCer (O-18:0)18:1;O2/23:0	-0.102437002	0.18650716
AHexCer 59:2;O2|AHexCer (O-18:0)18:1;O2/23:1	-0.394147437	0.74837288
AHexCer 60:3;O2|AHexCer (O-18:1)18:1;O2/24:1	-0.077628105	0.15407002
AHexCer 68:2;O2|AHexCer (O-26:0)18:1;O2/24:1	0.141972175	0.15068803
Cer 42:0;O4|Cer 18:0;O3/24:0(2OH)	-0.024042019	0.03163466
Cer 42:0;O4|Cer 18:0;O3/24:0(2OH)	-0.043014003	0.0532439
Cer 38:0;O3|Cer 18:0;O2/20:0;O	1.21889874	1.18045151
Cer 40:0;O3|Cer 18:0;O2/22:0;O	0.877020187	1.07151182
Cer 41:0;O3|Cer 18:0;O2/23:0;O	0.73558328	0.98013565
Cer 41:0;O3|Cer 18:0;O2/23:0;O	0.354747466	0.39508888
Cer 41:0;O3|Cer 18:0;O2/23:0;O	-0.038899851	0.08084278
Cer 42:0;O3|Cer 18:0;O2/24:0;O	1.036770431	1.0157669
Cer 43:0;O3|Cer 18:0;O2/25:0;O	0.036417819	0.08878027
Cer 36:1;O3|Cer 18:1;O2/18:0;O	-0.079135144	0.09065891
Cer 36:1;O3|Cer 18:1;O2/18:0;O	0.391836197	0.75630616
Cer 38:1;O3|Cer 18:1;O2/20:0;O	0.447127905	0.8161816
Cer 39:4;O3|Cer 18:2;O2/21:2;O	0.456497391	3.08524816
Cer 40:1;O3|Cer 18:1;O2/22:0;O	-0.087739087	0.24349321
Cer 41:1;O3|Cer 18:1;O2/23:0;O	-0.106146864	0.34716284
Cer 42:2;O3|Cer 18:1;O2/24:1;O	0.608370704	1.66439811
Cer 36:0;O2|Cer 18:0;O2/18:0	-0.143340389	0.34508982
Cer 42:1;O2|Cer 18:0;O2/24:1	0.812240571	0.68977326
Cer 34:1;O2|Cer 18:1;O2/16:0	0.025523666	0.03622454
Cer 36:1;O2|Cer 18:1;O2/18:0	-0.1760546	0.48623613
Cer 36:2;O2|Cer 18:1;O2/18:1	-0.099528143	0.23561451
Cer 37:1;O2|Cer 18:1;O2/19:0	-0.282988065	0.92624115
Cer 38:1;O2|Cer 20:1;O2/18:0	-0.26710714	0.93205051
Cer 38:2;O2|Cer 18:1;O2/20:1	-0.170591219	0.78256989
Cer 38:2;O2|Cer 18:1;O2/20:1	0.351975893	0.79533773
Cer 38:2;O2|Cer 18:1;O2/20:1	-0.1631133	0.74237062

Cer 39:2;O2|Cer 18:1;O2/21:1	-0.144144837	0.30279498
Cer 40:1;O2|Cer 18:1;O2/22:0	-0.110099178	0.41919299
Cer 40:1;O2|Cer 18:1;O2/22:0	-0.141777963	0.49113338
Cer 40:2;O2|Cer 18:1;O2/22:1	-0.04221036	0.11061873
Cer 40:2;O2|Cer 18:1;O2/22:1	0.695147658	0.99828271
Cer 41:1;O2|Cer 18:1;O2/23:0	-0.022779672	0.07213739
Cer 41:1;O2|Cer 18:1;O2/23:0	0.049919356	0.10482253
Cer 41:2;O2|Cer 18:1;O2/23:1	-0.095297007	0.38657176
Cer 41:2;O2|Cer 18:1;O2/23:1	0.582751276	0.89572946
Cer 41:3;O2|Cer 18:2;O2/23:1	-0.081506231	0.30638803
Cer 42:1;O2|Cer 18:1;O2/24:0	0.258904934	0.47576233
Cer 42:2;O2|Cer 18:1;O2/24:1	0.08518626	0.1628229
Cer 42:2;O2|Cer 18:1;O2/24:1	0.817803321	1.0431566
Cer 42:2;O2|Cer 18:1;O2/24:1	-0.029776923	0.12146082
Cer 42:3;O2|Cer 18:1;O2/24:2	0.619281805	1.54311093
Cer 42:3;O2|Cer 18:1;O2/24:2	-0.116629584	0.44244866
Cer 44:2;O2|Cer 20:1;O2/24:1	-0.037271718	0.06574724
DG 30:0|DG 14:0_16:0	0.279455363	1.06783347
DG 32:0|DG 16:0_16:0	0.023647092	0.03329857
DG 32:1|DG 14:0_18:1	0.475102189	2.25170643
DG 33:0|DG 16:0_17:0	-0.048259802	0.11600935
DG 33:1|DG 16:0_17:1	0.576807119	2.19458293
DG 34:0|DG 16:0_18:0	-0.106029192	0.18682252
DG 34:1|DG 16:0_18:1	0.439761328	3.00492376
DG 34:2|DG 16:1_18:1	0.390223177	3.25256032
DG 35:0|DG 17:0_18:0	-0.191488513	0.3500086
DG 35:1|DG 17:0_18:1	0.407460347	1.0367605
DG 36:0|DG 18:0_18:0	-0.17439677	0.31928958
DG 36:1|DG 18:0_18:1	0.196519699	0.47215439
DG 36:3|DG 18:0_18:3	0.364487814	2.49392471
DG 36:4|DG 18:2_18:2	0.321953159	0.64236088
DG 36:5|DG 16:0_20:5	0.177886991	1.58177049
DG 36:5|DG 16:1_20:4	0.456826188	3.48137533
DG 36:6|DG 18:3_18:3	0.077984515	0.29796303
DG 37:0|DG 16:0_21:0	0.024535462	0.03201018
DG 37:1|DG 19:0_18:1	0.223624201	0.37297942
DG 37:2|DG 18:1_19:1	0.345422209	0.71295974
DG 37:4|DG 17:0_20:4	0.072395463	0.13768063
DG 38:0|DG 18:0_20:0	-0.137789772	0.22103904
DG 38:1|DG 20:0_18:1	0.145568534	0.20479579
DG 38:2|DG 18:1_20:1	0.211542629	0.49078305
DG 38:3|DG 18:0_20:3	0.221490816	0.37456733
DG 38:3|DG 18:0_20:3	0.022773098	0.04277793
DG 38:4|DG 18:1_20:3	0.440249559	2.8824695
DG 38:6|DG 16:0_22:6	0.078086396	0.17945298
DG 39:0|DG 16:0_23:0	0.19667196	0.27146661
DG 39:1|DG 21:0_18:1	0.404355417	0.43700062
DG 39:2|DG 16:1_23:1	0.240993143	0.58244525
DG 40:0|DG 16:0_24:0	0.127173525	0.18074482
DG 40:1|DG 22:0_18:1	0.429459353	0.45756941
DG 40:2|DG 18:1_22:1	0.204711248	0.27319969
DG 40:4|DG 18:0_22:4	0.071630347	0.14237949

DG 40:5|DG 20:1_20:4	0.160421532	0.60157551
DG 40:6|DG 18:0_22:6	0.335699385	0.62048719
DG 41:0|DG 16:0_25:0	0.374020841	0.37616043
DG 41:1|DG 23:0_18:1	0.620420629	0.55949948
DG 41:2|DG 18:1_23:1	0.303564031	0.33290934
DG 42:1|DG 24:0_18:1	0.67600162	0.57696337
DG 42:2|DG 18:1_24:1	0.476851611	0.46869282
DG 42:3|DG 18:1_24:2	0.416512172	0.48269456
DG 42:4|DG 18:0_24:4	0.184828815	0.27731299
DG 42:7|DG 18:1_24:6	0.245725642	0.2484541
DG 43:1|DG 25:0_18:1	0.783460331	0.58446391
DG 44:1|DG 26:0_18:1	0.604836972	0.50979482
DG 44:2|DG 20:1_24:1	0.427079698	0.54303485
DG O-36:2|DG O-19:1_17:1	-0.01452994	0.03517348
DG O-38:7|DG O-16:1_22:6	0.535336138	3.41278698
DG O-40:5|DG O-18:1_22:4	0.356147333	0.5649231
DG O-40:7|DG O-18:1_22:6	0.327438685	2.23738998
DG O-40:8|DG O-18:2_22:6	0.562632352	1.73678102
LPC O-18:1	0.556369186	1.01136101
LPC O-18:2	0.172449065	0.74688592
LPE O-16:0	0.571688632	1.85716646
LPE O-20:4	0.138872046	0.70873526
LPE P-16:1	0.355720073	2.47004445
LPE P-18:1	0.299650885	3.73192031
LPE P-18:2	0.313590092	5.60841551
LPE P-18:2	0.213413687	1.44983377
LPE P-18:2	0.217099582	1.46173403
LPE P-18:3	0.309803668	0.96084296
PC O-30:0|PC O-16:0_14:0	0.212248458	2.81426458
PC O-32:0|PC O-16:0_16:0	-0.047169021	0.54761067
PC O-32:1|PC O-16:0_16:1	0.324688994	3.93876934
PC O-32:1|PC O-16:1_16:0	-0.078767339	1.37705014
PC O-34:1|PC O-16:0_18:1	0.01657147	0.18844458
PC O-34:1|PC O-18:1_16:0	-0.222251281	2.73430317
PC O-34:2|PC O-16:1_18:1	0.026695813	0.14325763
PC O-35:6|PC O-16:2_19:4	0.715134736	0.89684593
PC O-36:0|PC O-20:0_16:0	-0.091109978	0.64029735
PC O-36:1|PC O-16:1_20:0	-0.120259239	0.7693653
PC O-36:1|PC O-18:0_18:1	0.025307798	0.12117318
PC O-36:1|PC O-18:1_18:0	-0.06894315	0.12349226
PC O-36:2|PC O-18:1_18:1	0.007451342	0.03601025
PC O-36:2|PC O-18:1_18:1	0.130573681	1.59640965
PC O-36:3|PC O-18:3_18:0	-0.097586783	0.53794781
PC O-38:2|PC O-18:1_20:1	-0.237732176	0.32415209
PC O-38:3|PC O-20:3_18:0	-0.096796958	0.35099875
PC O-38:4|PC O-16:0_22:4	0.181131206	1.35464978
PC O-38:5|PC O-18:1_20:4	-0.05582255	0.52761655
PC O-38:5|PC O-18:1_20:4	0.487352188	2.33301444
PC O-40:5|PC O-18:0_22:5	0.131882389	0.74085631
PC O-40:6|PC O-18:0_22:6	-0.010508363	0.07912914
PC O-40:7|PC O-18:1_22:6	-0.190644248	2.22506257
HexCer 40:0;O4|HexCer 18:0;O3/22:0(2OH)	-0.153774664	0.35454744

HexCer 42:0;O4|HexCer 18:0;O3/24:0(2OH)	0.086357057	0.23370384
HexCer 39:2;O3|HexCer 18:1;O2/21:1;O	-0.56981673	2.21646621
HexCer 34:1;O2|HexCer 18:1;O2/16:0	0.174177642	0.62235174
HexCer 36:1;O2|HexCer 18:1;O2/18:0	0.163631808	0.51895577
HexCer 36:1;O2|HexCer 18:1;O2/18:0	0.865843724	4.26036205
HexCer 36:2;O2|HexCer 18:1;O2/18:1	0.616250615	1.20073838
HexCer 36:2;O2|HexCer 18:2;O2/18:0	0.137024269	0.40523208
HexCer 38:1;O2|HexCer 18:1;O2/20:0	0.010598062	0.02947418
HexCer 38:2;O2|HexCer 18:1;O2/20:1	-0.199319885	0.52192646
HexCer 39:1;O2|HexCer 18:1;O2/21:0	-0.156657426	0.42563955
HexCer 39:2;O2|HexCer 18:1;O2/21:1	-0.3778372	0.95632881
HexCer 40:1;O2|HexCer 18:1;O2/22:0	0.258907208	0.59216578
HexCer 40:2;O2|HexCer 18:1;O2/22:1	0.425308344	0.74855108
HexCer 40:2;O2|HexCer 18:1;O2/22:1	-0.09542219	0.30510024
HexCer 40:2;O2|HexCer 18:1;O2/22:1	-0.058051012	0.17690079
HexCer 41:1;O2|HexCer 18:1;O2/23:0	-0.024400414	0.06329579
HexCer 41:1;O2|HexCer 18:1;O2/23:0	0.423029029	0.97874018
HexCer 41:2;O2|HexCer 18:1;O2/23:1	-0.128363894	0.41985462
HexCer 41:2;O2|HexCer 18:1;O2/23:1	-0.279017886	1.18064696
HexCer 42:1;O2|HexCer 18:1;O2/24:0	0.099270452	0.2731371
HexCer 42:2;O2|HexCer 18:1;O2/24:1	-0.005840663	0.01373781
HexCer 42:2;O2|HexCer 18:1;O2/24:1	0.110060878	0.41745481
HexCer 42:2;O2|HexCer 18:1;O2/24:1	-0.03379196	0.1267149
HexCer 42:3;O2|HexCer 18:1;O2/24:2	-0.110500252	0.47630213
HexCer 42:3;O2|HexCer 18:1;O2/24:2	0.09340664	0.1399256
HexCer 42:4;O2|HexCer 18:2;O2/24:2	-0.233115116	0.79405059
HexCer 43:2;O2|HexCer 18:1;O2/25:1	-0.091443898	0.23232793
HexCer 44:1;O2|HexCer 18:1;O2/26:0	0.347752307	0.51794756
HexCer 44:2;O2|HexCer 18:1;O2/26:1	0.046374484	0.12518037
HexCer 44:2;O2|HexCer 20:1;O2/24:1	0.174481149	0.3488525
HexCer 44:3;O2|HexCer 18:1;O2/26:2	-0.110777911	0.29087898
LPC 14:0/0:0	0.55505279	4.12782068
LPC 16:0	0.204060977	2.02234598
LPC 16:0/0:0	0.345621002	2.77018094
LPC 16:1	0.204409479	0.74041363
LPC 16:1	0.168075512	0.79094482
LPC 16:1/0:0	0.447447911	2.56799393
LPC 17:0/0:0	0.350888624	6.14810265
LPC 18:0	0.303503623	1.69820785
LPC 18:0/0:0	0.228684941	3.55380024
LPC 18:1	0.162325109	0.89083367
LPC 18:1/0:0	0.250055666	2.77584172
LPC 18:1/0:0	0.29221364	2.07787812
LPC 18:2	0.304696679	1.68652525
LPC 18:2/0:0	0.348703122	2.02534749
LPC 19:0/0:0	0.344773626	2.01785956
LPC 20:0	0.296725686	1.13626886
LPC 20:0/0:0	0.106002678	1.21851497
LPC 20:0/0:0	0.336887405	1.16998762
LPC 20:1	0.097097132	0.86952281
LPC 20:1/0:0	0.112860006	1.31741648
LPC 20:2	0.096005611	0.41967871

LPC 20:2/0:0	0.334054911	1.6771596
LPC 20:3/0:0	0.369705514	1.91810598
LPC 20:4	-0.065941319	0.20679475
LPC 20:4/0:0	0.241804379	1.80456544
LPC 22:1/0:0	0.291072319	1.51688922
LPC 22:4/0:0	0.23382393	1.02696596
LPC 22:5	-0.176436284	0.7075449
LPC 22:5	0.218793874	0.64268263
LPC 22:5/0:0	0.507174292	1.63884663
LPC 22:5/0:0	0.063090178	0.18607457
LPC 22:6	-0.237726777	1.03016715
LPC 22:6/0:0	0.116010709	0.32943611
LPC 23:0/0:0	0.643341033	1.915706
LPC 24:0/0:0	0.465152348	1.79143231
LPC 24:1	0.518818833	1.71420981
LPC 24:4/0:0	0.291727844	0.82037568
LPC 24:6/0:0	0.334694573	0.99228548
LPC 25:0/0:0	1.23395177	0.79276572
LPC 26:1/0:0	0.346848532	1.08641542
LPE 16:0	0.389544182	3.79247001
LPE 16:1	0.446022851	2.38143242
LPE 17:0	0.456096263	3.66562777
LPE 18:0	0.298792091	5.76035583
LPE 18:0	0.40508751	1.54251297
LPE 18:1	0.336655942	3.77587131
LPE 18:1	0.244903668	2.31410512
LPE 18:2	0.556358862	1.31127157
LPE 18:2	0.416688553	2.70515218
LPE 19:1	-0.114486137	0.21055774
LPE 20:1	0.567534902	0.75786665
LPE 20:1	0.516850323	0.61003833
LPE 20:4	0.229396233	0.78768563
LPE 20:4	0.460172733	2.90969575
LPE 22:4	0.372300972	2.09416795
LPE 22:4	0.287493564	3.35558309
LPE 22:5	0.24559775	1.08429833
LPE 22:6	0.248526865	1.43724129
LPE 22:6	0.05992669	0.20513591
LPE 24:6	0.46977731	3.11876193
PC 32:0|PC 16:0_16:0	-0.048294226	0.77400105
PC 32:1|PC 16:0_16:1	0.116612828	1.60523147
PC 32:1|PC 16:0_16:1	0.153191271	1.06977871
PC 32:2|PC 16:1_16:1	0.084628506	0.75633304
PC 34:0|PC 16:0_18:0	-0.069009777	1.04283161
PC 34:1|PC 16:0_18:1	-0.048663083	0.28573103
PC 34:1|PC 16:0_18:1	0.061161969	0.07504626
PC 34:2|PC 16:0_18:2	0.064059394	0.52036674
PC 34:2|PC 16:1_18:1	0.120913284	1.4307934
PC 34:3|PC 16:0_18:3	0.170366153	1.04790384
PC 34:4|PC 14:0_20:4	-0.032861641	0.31368412
PC 35:4|PC 15:0_20:4	0.188894359	0.50395743
PC 36:1|PC 18:0_18:1	0.03543253	1.47823996

PC 36:2|PC 18:0_18:2	0.050965614	0.26805128
PC 36:2|PC 18:1_18:1	-0.001550855	0.02534566
PC 36:3|PC 16:0_20:3	-0.013145241	0.10875019
PC 36:3|PC 16:0_20:3	0.12236929	0.79720974
PC 36:3|PC 16:0_20:3	0.02316476	0.11806727
PC 36:4|PC 16:0_20:4	0.018508137	0.14590689
PC 36:4|PC 18:2_18:2	0.074028261	0.3891281
PC 36:5|PC 16:0_20:5	0.04452465	0.25059217
PC 36:5|PC 16:1_20:4	-0.07598373	0.55509171
PC 36:6|PC 14:0_22:6	-0.098920212	0.73635923
PC 37:2|PC 18:1_19:1	-0.085559735	0.85947007
PC 38:2|PC 18:1_20:1	-0.052639114	2.12869742
PC 38:3|PC 18:0_20:3	-0.062592106	1.16440661
PC 38:3|PC 18:0_20:3	0.045307616	0.74969053
PC 38:4|PC 18:0_20:4	0.037618748	0.27312781
PC 38:4|PC 18:1_20:3	0.118779857	0.38130814
PC 38:5|PC 18:1_20:4	-0.010244933	0.04346528
PC 38:6|PC 18:2_20:4	-0.096450654	0.68285456
PC 38:7|PC 16:1_22:6	-0.115557683	1.01754221
PC 39:1|PC 21:0_18:1	0.016742572	0.06397595
PC 39:4|PC 17:0_22:4	-0.02823514	0.41177289
PC 39:4|PC 19:0_20:4	-0.037717544	0.29795551
PC 39:5|PC 19:1_20:4	-0.198975199	2.03116589
PC 39:6|PC 17:0_22:6	-0.065119529	0.39481829
PC 40:0|PC 16:0_24:0	0.12979339	0.22011867
PC 40:2|PC 20:1_20:1	-0.059173865	0.40886142
PC 40:5|PC 18:0_22:5	-0.090656203	0.64948147
PC 40:6|PC 16:0_24:6	-0.029424748	0.1904361
PC 40:6|PC 20:2_20:4	-0.004996982	0.02678364
PC 40:7|PC 18:1_22:6	-0.141404675	0.9508029
PC 40:8|PC 18:2_22:6	-0.367276046	1.81314422
PC 41:1|PC 23:0_18:1	0.354877073	0.73040238
PC 41:6|PC 19:0_22:6	-0.090687471	0.88097922
PC 42:1|PC 24:0_18:1	0.216312328	0.75117464
PC 42:10|PC 20:4_22:6	-0.197446257	1.09153916
PC 42:4|PC 22:0_20:4	0.103763935	0.97461315
PC 42:6|PC 18:0_24:6	-0.130217057	1.23144839
PC 42:7|PC 20:1_22:6	-0.181892085	1.20334396
PC 42:9|PC 20:4_22:5	-0.263911951	1.0893625
PC 43:1|PC 25:0_18:1	0.389956379	0.55970643
PC 43:2|PC 18:1_25:1	-0.043653607	0.0964255
PC 44:11|PC 22:5_22:6	-0.423784536	1.25440778
PC 44:5|PC 24:1_20:4	0.032887729	0.2165493
SHexCer 36:1;O3|SHexCer 18:1;O2/18:0;O	0.470351732	1.73195794
SHexCer 38:1;O3|SHexCer 18:1;O2/20:0;O	0.104256712	0.21660453
SHexCer 38:2;O3|SHexCer 18:2;O2/20:0;O	-0.260779549	0.24687169
SHexCer 40:1;O3|SHexCer 18:1;O2/22:0;O	-0.012594261	0.02669584
SHexCer 40:2;O3|SHexCer 18:1;O2/22:1;O	-0.125357848	0.42592542
SHexCer 41:0;O3|SHexCer 18:0;O2/23:0;O	-0.04420987	0.07756338
SHexCer 41:1;O3|SHexCer 18:1;O2/23:0;O	-0.18629515	0.46363127
SHexCer 41:2;O3|SHexCer 18:1;O2/23:1;O	-0.410790534	0.82230569
SHexCer 42:1;O3|SHexCer 18:1;O2/24:0;O	1.013926132	0.69402191

SHexCer 42:1;O3|SHexCer 18:1;O2/24:0;O	0.050519833	0.12154693
SHexCer 42:2;O3|SHexCer 18:1;O2/24:1;O	-0.059085255	0.16889609
SHexCer 42:3;O3|SHexCer 18:2;O2/24:1;O	-0.096756592	0.32187815
SHexCer 43:1;O3|SHexCer 18:1;O2/25:0;O	-0.131028102	0.36346124
SHexCer 43:2;O3|SHexCer 18:1;O2/25:1;O	-0.470833859	0.73284431
SHexCer 44:2;O3|SHexCer 18:1;O2/26:1;O	0.008333858	0.0225015
SM 26:1;O3	0.55899758	1.57813276
SM 29:2;O3	2.348398879	0.79043564
SM 34:2;O3	-0.020856397	0.01535553
SM 44:3;O2|SM 18:1;O2/26:2	0.053626662	0.51880567
TG 48:1|TG 16:0_16:0_16:1	0.090871861	1.25697181
TG 48:2|TG 14:0_16:1_18:1	-0.015188057	0.03587036
TG 49:0|TG 16:0_16:0_17:0	-0.01216541	0.03987446
TG 49:3|TG 15:0_16:1_18:2	-0.265195668	0.57159979
TG 50:0|TG 16:0_16:0_18:0	-0.126688278	0.39294869
TG 50:1|TG 16:0_16:0_18:1	0.054173248	1.14721586
TG 50:2|TG 16:0_16:1_18:1	0.055644707	0.68825805
TG 50:3|TG 16:1_16:1_18:1	-0.112722126	0.83213599
TG 50:4|TG 16:0_18:1_16:3	0.156976091	1.69620875
TG 51:0|TG 16:0_17:0_18:0	0.03114122	0.075944
TG 52:0|TG 16:0_18:0_18:0	-0.161511073	0.53185527
TG 52:1|TG 16:0_18:0_18:1	-0.04701423	0.32717849
TG 52:2|TG 16:0_18:1_18:1	0.05620745	0.78297591
TG 52:3|TG 16:0_18:1_18:2	-0.08447568	0.89045242
TG 52:4|TG 16:1_18:1_18:2	-0.283541482	1.5986686
TG 52:5|TG 16:1_18:2_18:2	-0.006947325	0.01154352
TG 52:6|TG 14:0_16:0_22:6	0.040431385	0.72930181
TG 52:6|TG 16:1_18:2_18:3	-0.098739571	0.58871469
TG 53:0|TG 16:0_18:0_19:0	-0.127684094	0.51951335
TG 53:1|TG 16:0_18:0_19:1	-0.035326651	0.20149838
TG 53:2|TG 16:0_18:1_19:1	0.054644741	0.46102878
TG 53:4|TG 17:0_18:2_18:2	0.066250567	0.2737765
TG 54:0|TG 16:0_18:0_20:0	-0.119311928	0.38558441
TG 54:1|TG 16:0_18:0_20:1	-0.08644354	0.48078282
TG 54:2|TG 16:0_18:1_20:1	0.021669771	0.16663075
TG 54:3|TG 18:0_18:1_18:2	0.079679477	0.45342588
TG 54:5|TG 18:1_18:2_18:2	0.030148378	0.09212755
TG 54:6|TG 16:0_16:0_22:6	0.071779264	1.9432968
TG 54:6|TG 18:1_18:2_18:3	0.103507778	0.34076242
TG 54:7|TG 18:2_18:2_18:3	0.211571049	0.58772501
TG 54:8|TG 18:2_18:3_18:3	0.12623654	0.35013374
TG 55:1|TG 16:0_21:0_18:1	-0.079856973	0.46419664
TG 55:2|TG 16:0_18:1_21:1	0.025471858	0.16602929
TG 56:0|TG 14:0_18:0_24:0	-0.053035312	0.1713648
TG 56:0|TG 15:0_15:0_26:0	0.086028594	0.2490148
TG 56:1|TG 16:0_16:0_24:1	-0.076115013	0.27501955
TG 56:10|TG 14:0_20:4_22:6	-0.040194639	0.18326732
TG 56:2|TG 16:0_18:1_22:1	0.061548672	0.1025174
TG 56:2|TG 18:0_18:1_20:1	-0.00351528	0.01493947
TG 56:3|TG 18:0_18:0_20:3	-0.004665838	0.02626626
TG 56:4|TG 16:0_18:0_22:4	0.029061673	0.15128758
TG 56:6|TG 16:0_18:1_22:5	0.043738515	0.32401936

TG 56:7|TG 16:0_18:1_22:6	-0.010452544	0.07063493
TG 57:0|TG 16:0_18:0_23:0	0.060663312	0.25382868
TG 57:1|TG 16:0_23:0_18:1	-0.022712539	0.08347757
TG 58:0|TG 16:0_18:0_24:0	-0.021050082	0.05198182
TG 58:1|TG 16:0_18:0_24:1	0.003383032	0.00817683
TG 58:2|TG 16:0_18:1_24:1	0.045243523	0.1634606
TG 58:3|TG 18:1_18:1_22:1	0.012184847	0.05436706
TG 58:4|TG 18:0_18:0_22:4	-0.004838569	0.01991924
TG 58:6|TG 18:0_18:0_22:6	-0.056986969	0.62835617
TG 58:7|TG 16:0_20:1_22:6	-0.106307248	3.61746238
TG 58:8|TG 18:1_18:1_22:6	-0.152122265	1.15327895
TG 59:3|TG 18:1_18:1_23:1	-0.127021065	0.44954084
TG 60:0|TG 16:0_20:0_24:0	0.056968802	0.07736537
TG 60:2|TG 18:0_18:1_24:1	0.143420827	0.42716392
TG 60:3|TG 18:1_18:1_24:1	0.04937015	0.18034037
TG 60:7|TG 16:0_22:1_22:6	-0.122805413	0.88814487
TG 61:3|TG 18:1_18:1_25:1	-0.076578233	0.16150814
TG 62:12|TG 18:0_22:6_22:6	-0.132717337	1.19494549
TG 62:3|TG 18:1_20:1_24:1	0.245991419	0.55324611
CL 68:7|CL 16:1_16:1_16:1_20:4	-0.005642531	0.01710707
CL 68:4|CL 16:0_18:2_16:1_18:1	0.241617312	1.037047
CL 68:3|CL 16:0_18:1_16:1_18:1	0.222229351	0.60269888
CL 68:2|CL 16:0_18:1_18:0_16:1	0.547917664	1.5190166
CL 68:2|CL 16:0_18:1_16:0_18:1	0.197769378	0.47503675
CL 69:4|CL 16:1_18:1_17:1_18:1	0.229986064	1.31614628
CL 70:8|CL 16:1_18:2_16:1_20:4	-0.052305605	0.22488433
CL 70:6|CL 16:0_18:1_16:1_20:4	0.084723739	0.29836015
CL 70:5|CL 16:1_18:1_18:1_18:2	0.17809128	0.81475967
CL 70:4|CL 18:0_18:2_16:1_18:1	0.212463137	0.74718436
CL 70:4|CL 16:1_18:1_18:1_18:1	0.235248009	0.77572093
CL 70:3|CL 16:0_18:1_18:1_18:1	0.232392754	0.54695292
CL 71:5|CL 17:1_18:1_18:1_18:2	0.173387162	0.89030309
CL 72:10|CL 16:1_20:4_16:1_20:4	-0.100767329	0.37718245
CL 72:9|CL 16:0_20:4_16:1_20:4	-0.201277757	0.83938765
CL 72:8|CL 16:1_18:1_18:2_20:4	-0.027412528	0.12141152
CL 72:7|CL 16:0_18:2_18:1_20:4	0.051750055	0.18921858
CL 72:6|CL 18:1_18:2_18:1_18:2	0.102404244	0.50010031
CL 72:5|CL 18:1_18:1_18:1_18:2	0.10806077	0.42979973
CL 72:4|CL 18:1_18:1_18:1_18:1	0.154990704	0.46340354
CL 73:7|CL 17:1_18:1_18:1_20:4	0.027703887	0.08060736
CL 74:12|CL 16:1_20:4_16:1_22:6	-0.175439718	0.90211303
CL 74:11|CL 16:1_20:4_18:2_20:4	-0.163767179	1.06813752
CL 74:10|CL 16:1_20:4_18:1_20:4	-0.072511814	0.27936671
CL 74:9|CL 16:0_18:2_18:1_22:6	-0.011824242	0.02412723
CL 74:9|CL 16:1_18:1_20:3_20:4	-0.071769317	0.38942041
CL 74:8|CL 18:1_18:2_18:1_20:4	-0.06726949	0.29648546
CL 74:8|CL 18:1_18:1_18:2_20:4	0.016285985	0.03522913
CL 74:7|CL 18:1_18:2_18:1_20:3	0.019541626	0.06598631
CL 74:7|CL 18:1_18:1_18:1_20:4	0.015520438	0.0419835
CL 74:7|CL 18:0_18:2_18:1_20:4	0.019522786	0.04888435
CL 75:10|CL 17:1_20:4_18:1_20:4	-0.447738165	1.3915379
CL 76:13|CL 16:1_20:4_18:2_22:6	-0.227997989	1.46931239

CL 76:12|CL 16:1_20:4_18:1_22:6	-0.15536254	0.48131938
CL 76:11|CL 18:1_20:4_18:2_20:4	-0.178689983	1.02088755
CL 76:10|CL 18:1_20:4_18:2_20:3	-0.091924444	0.45439429
CL 76:9|CL 18:0_18:2_20:3_20:4	-0.05519566	0.18159063
CL 78:15|CL 16:1_20:4_20:4_22:6	-0.224963096	0.86174524
CL 78:13|CL 18:1_20:4_18:2_22:6	-0.176895745	0.89701035
CL 78:12|CL 18:1_20:4_18:1_22:6	-0.150344297	0.74626445
CL 80:15|CL 18:1_20:4_20:4_22:6	-0.210101658	0.99732057
CL 80:14|CL 18:1_22:6_18:1_22:6	-0.188495495	0.8401506
CL 82:18|CL 18:2_22:6_20:4_22:6	-0.33995453	1.28754855
CL 82:14|CL 18:1_22:6_20:3_22:4	-0.257070406	2.38219557
CL 84:20|CL 20:4_22:6_20:4_22:6	-0.331868183	1.1347452
CL 84:19|CL 18:1_22:6_22:6_22:6	-0.323931507	1.60841451
LPG O-20:2	0.188060176	0.65029041
PE O-32:2|PE O-18:2_14:0	0.159861889	0.34298751
PE O-32:1|PE O-16:1_16:0	-0.210627696	1.5194343
PE O-32:1|PE O-16:0_16:1	0.299937621	1.34503397
PE O-32:0|PE O-16:0_16:0	-0.144226322	0.77893252
PE O-33:1|PE O-17:1_16:0	-0.176572378	0.80704981
PE O-34:5|PE O-14:1_20:4	0.054959325	0.40941898
PE O-34:3|PE O-16:1_18:2	0.033348484	0.09562165
PE O-34:2|PE O-16:1_18:1	0.050165509	0.30650406
PE O-34:1|PE O-16:0_18:1	-0.018339666	0.09077131
PE O-34:0|PE O-18:0_16:0	-0.377944857	2.41502942
PE O-35:3|PE O-18:2_17:1	-0.01034962	0.02875867
PE O-35:1|PE O-17:0_18:1	0.123483786	0.24789311
PE O-36:6|PE O-16:1_20:5	0.132815154	1.33942326
PE O-36:5|PE O-16:1_20:4	0.196574865	0.88777911
PE O-36:4|PE O-16:0_20:4	0.060642673	0.29488236
PE O-36:4|PE O-16:1_20:3	0.076994754	0.61040627
PE O-36:3|PE O-18:2_18:1	0.022949404	0.07617578
PE O-36:2|PE O-18:1_18:1	0.039444178	0.12241142
PE O-36:0|PE O-20:0_16:0	0.113307883	0.46449248
PE O-37:6|PE O-17:2_20:4	-0.154081708	1.455285
PE O-37:5|PE O-17:1_20:4	0.046223127	0.20193245
PE O-37:4|PE O-17:1_20:3	0.293756931	0.5595737
PE O-37:3|PE O-18:2_19:1	-0.121665951	0.40073417
PE O-37:2|PE O-17:1_20:1	0.031541357	0.06133903
PE O-38:8|PE O-16:2_22:6	-0.247930669	1.34859606
PE O-38:7|PE O-16:1_22:6	-0.054513979	0.50507258
PE O-38:6|PE O-20:5_18:1	0.091466234	0.41042474
PE O-38:6|PE O-18:2_20:4	0.049103159	0.34173331
PE O-38:5|PE O-18:1_20:4	0.034800523	0.94325797
PE O-38:5|PE O-16:1_22:4	0.018552358	0.23848302
PE O-38:5|PE O-18:2_20:3	0.029302571	0.13233506
PE O-38:4|PE O-18:1_20:3	-0.009029351	0.03358935
PE O-38:4|PE O-16:0_22:4	0.008667274	0.05231881
PE O-38:4|PE O-18:2_20:2	-0.030696295	0.19313682
PE O-38:4|PE O-18:1_20:3	-0.019641165	0.09307024
PE O-38:3|PE O-18:2_20:1	-0.135026662	0.442503
PE O-38:2|PE O-18:1_20:1	-0.128525349	0.37396727
PE O-38:2|PE O-18:1_20:1	0.036684533	0.07240644

PE O-39:8|PE O-17:2_22:6	-0.355387279	1.41040013
PE O-38:1|PE O-18:1_20:0	0.050958749	0.09828659
PE O-38:1|PE O-18:1_20:0	0.173435449	0.20520416
PE O-39:7|PE O-17:1_22:6	-0.132194756	2.05021248
PE O-38:0|PE O-18:0_20:0	-0.078323289	0.20204136
PE O-39:6|PE O-17:0_22:6	0.028052856	0.22108981
PE O-39:3|PE O-18:2_21:1	-0.172590271	0.55622083
PE O-40:9|PE O-20:5_20:4	-0.227499755	1.45923922
PE O-40:9|PE O-18:3_22:6	-0.129604636	1.05405299
PE O-39:2|PE O-18:1_21:1	-0.022251197	0.04211285
PE O-40:8|PE O-18:2_22:6	-0.084726865	0.45451608
PE O-40:8|PE O-18:2_22:6	-0.136720544	1.31149497
PE O-40:7|PE O-18:1_22:6	-0.081076753	3.98031084
PE O-40:7|PE O-18:2_22:5	-0.012423757	0.12453492
PE O-40:6|PE O-18:2_22:4	-0.129285259	1.19431252
PE O-40:6|PE O-18:0_22:6	-0.002172986	0.03002827
PE O-40:5|PE O-18:1_22:4	-0.064448659	0.5002405
PE O-40:4|PE O-18:1_22:3	-0.113377762	0.7191445
PE O-40:4|PE O-18:0_22:4	-0.056496924	0.50784009
PE O-40:3|PE O-20:2_20:1	-0.081679663	0.2024417
PE O-40:2|PE O-18:1_22:1	0.172010358	0.28574587
PE O-41:6|PE O-21:3_20:3	0.173809291	1.68403802
PE O-42:10|PE O-20:4_22:6	0.412260671	0.66247842
PE O-41:3|PE O-18:2_23:1	-0.36481111	1.8886676
PE O-42:9|PE O-20:3_22:6	0.139785887	0.24863372
PE O-41:2|PE O-18:1_23:1	0.028649859	0.03066042
PE O-42:8|PE O-18:2_24:6	-0.134723595	1.1391581
PE O-42:7|PE O-18:1_24:6	-0.076890979	1.5434253
PE O-42:7|PE O-18:1_24:6	-0.153966689	1.81344103
PE O-42:6|PE O-18:1_24:5	0.091534625	0.22740214
PE O-42:5|PE O-18:1_24:4	-0.056186684	0.35995634
PE O-42:5|PE O-20:1_22:4	-0.019007208	0.09559922
PE O-42:4|PE O-18:2_24:2	-0.127454651	0.9237013
PE O-42:3|PE O-22:2_20:1	0.067282721	0.11276555
PE O-42:2|PE O-18:1_24:1	0.344408814	0.45252944
PG O-38:7|PG O-16:1_22:6	-0.293536583	4.02593356
PI O-36:4|PI O-16:0_20:4	0.277581042	2.63139846
PI O-38:6|PI O-16:0_22:6	0.126578057	1.27456471
PI O-38:5|PI O-18:1_20:4	0.341077606	1.92582413
PI O-38:4|PI O-18:0_20:4	0.791918975	1.10559338
PI O-40:7|PI O-18:1_22:6	0.161593765	1.03312511
PI O-40:6|PI O-18:0_22:6	0.2996319	2.63179207
LPG 16:1	0.591219203	1.41502239
LPG 16:0	0.168615893	0.42799679
LPG 18:2	0.782572612	1.11692583
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LPG 18:1	0.635906672	1.27665716
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LPG 18:0	0.255028949	1.78145318
LPG 18:0	0.688729494	2.69452712
LPG 20:4	0.147826579	3.02918744
LPG 20:4	0.628727151	1.10174883

LPG 20:3	0.108297786	0.85011688
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LPG 20:3	0.628138369	2.91703135
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LPG 22:6	0.610854478	1.32108088
LPG 22:5	0.262347534	2.6095685
LPG 22:4	0.954465795	1.35352393
LPG 22:4	0.585797236	5.09116801
LPI 16:0	0.208055436	2.61454392
LPI 18:1	0.272916622	0.82434558
LPI 18:0	0.172947605	3.02535729
LPI 18:0	0.426215038	2.18380487
LPI 20:4	0.162304273	0.35349514
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LPI 22:6	0.310388842	0.48422882
LPI 22:6	0.035456741	0.06536853
PE 22:0;O|PE 18:0_4:0;O	0.705492995	1.55537862
PE 24:1;O|PE 18:1_6:0;O	0.158311657	0.89995398
PE 34:2;O|PE 16:0_18:2;O	1.063697919	3.43557056
PE 34:1;O|PE 16:0_18:1;O	0.766951369	2.21642547
PE 36:5;O|PE 16:0_20:5;O	0.646263589	3.29818095
PE 36:5;O|PE 16:1_20:4;O	0.561876268	3.20197875
PE 36:5;O|PE 16:1_20:4;O	0.401262985	1.02565862
PE 36:5;O|PE 16:0_20:5;O	0.535629986	1.99973576
PE 36:4;O|PE 16:0_20:4;O	0.538655132	3.19271691
PE 36:4;O|PE 16:0_20:4;O	0.50865864	3.65527814
PE 36:4;O|PE 16:0_20:4;O	0.505063064	3.43741971
PE 36:4;O|PE 16:0_20:4;O	0.576258111	3.47026586
PE 36:4;O|PE 16:0_20:4;O	0.498592612	3.42990419
PE 36:3;O|PE 18:1_18:2;O	0.685048457	4.00561952
PE 36:2;O|PE 18:1_18:1;O	0.471757912	1.65411221
PE 36:2;O|PE 18:1_18:1;O	0.621707975	2.64680707
PE 36:1;O|PE 18:0_18:1;O	0.655343324	1.50162737
PE 37:5;O|PE 22:5_15:0;O	0.093106437	0.58073086
PE 37:4;O|PE 17:0_20:4;O	-0.109881992	0.24912203
PE 36:4;O2|PE 16:0_20:4;O2	0.461770567	1.69839911
PE 36:4;O2|PE 16:0_20:4;O2	0.611434293	3.76996736
PE 36:2;O2|PE 18:1_18:1;O2	0.349595099	1.20734189
PE 36:2;O2|PE 18:1_18:1;O2	0.281649671	1.04878406
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PE 38:6;O|PE 16:0_22:6;O	0.40665606	1.03520168
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PE 38:6;O|PE 16:0_22:6;O	0.378046564	1.43171895
PE 38:6;O|PE 20:4_18:2;O	0.428491618	1.75226079
PE 38:5;O|PE 20:4_18:1;O	0.373335591	0.82486985
PE 38:5;O|PE 18:0_20:5;O	0.684666178	2.55066424
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PE 38:4;O|PE 18:0_20:4;O	0.562194284	3.43519484
PE 38:4;O|PE 18:1_20:3;O	0.521566593	3.77367238
PE 36:5;O3|PE 16:0_20:5;O3	0.702420139	2.6509816
PE 37:4;O2|PE 17:0_20:4;O2	0.741941173	1.75114278
PE 36:4;O3|PE 16:0_20:4;O3	0.71297525	2.47147768
PE 36:4;O3|PE 16:0_20:4;O3	0.680136438	0.9578857
PE 39:7;O|PE 22:6_17:1;O	0.04833584	0.30710003
PE 38:6;O2|PE 16:0_22:6;O2	0.301238926	0.90000535
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PE 38:5;O2|PE 18:1_20:4;O2	0.259359215	1.80102438
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PE 38:5;O2|PE 18:1_20:4;O2	0.251793292	1.782837
PE 38:5;O2|PE 18:0_20:5;O2	0.465421146	1.3453228
PE 38:4;O2|PE 18:0_20:4;O2	0.654542101	0.78503503
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PE 38:4;O2|PE 18:0_20:4;O2	0.749896325	2.14588773
PE 38:3;O2|PE 18:0_20:3;O2	-0.137118569	0.88439151
PE 36:4;O4|PE 16:0_20:4;O4	1.287198775	2.25018878
PE 40:7;O|PE 18:1_22:6;O	0.088026794	0.84153494
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PE 40:6;O|PE 22:6_18:0;O	-0.046040096	0.19893232
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PE 40:6;O|PE 22:6_18:0;O	0.339082663	0.84914184
PE 40:5;O|PE 18:1_22:4;O	0.817053905	0.85737083
PE 38:6;O3|PE 18:1_20:5;O3	0.383179587	2.74245986
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PE 38:5;O3|PE 18:0_20:5;O3	0.448724428	2.4331402
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PE 38:4;O3|PE 18:1_20:3;O3	0.718925188	1.96769912
PE 38:3;O3|PE 18:0_20:3;O3	0.588267817	3.18934179
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PE 42:10;O|PE 20:4_22:6;O	0.00445492	0.01666299
PE 38:4;O4|PE 18:0_20:4;O4	0.675544034	0.71994573
PE 42:8;O|PE 20:4_22:4;O	0.336740018	0.62303907
PE 42:8;O|PE 22:4_20:4;O	-0.071381039	0.33302441

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PE 40:6;O3|PE 18:0_22:6;O3	0.346087141	1.22932314
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PE 40:6;O3|PE 18:0_22:6;O3	0.083364747	0.204303
PE 40:6;O3|PE 18:0_22:6;O3	0.316025362	1.0018033
PE 40:5;O3|PE 18:0_22:5;O3	0.530751407	0.80988992
PE 40:5;O3|PE 18:0_22:5;O3	0.615414447	1.19587259
PE 40:4;O4|PE 18:0_22:4;O4	0.463188663	3.34287982
PE 44:12;O|PE 22:6_22:6;O	0.011853543	0.0379005
PE 44:11;O|PE 22:6_22:5;O	-0.205473508	0.88473671
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PE 40:6;O4|PE 18:0_22:6;O4	0.622249587	1.16237925
PE 40:6;O4|PE 22:6_18:0;O4	0.420860295	1.07488704
PE 40:6;O4|PE 22:4_18:2;O4	0.40706322	0.49424193
PE 40:6;O4|PE 22:6_18:0;O4	-0.45383008	1.58963126
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PE 44:10;O|PE 22:4_22:6;O	-0.095950862	0.32586528
PE 44:10;O|PE 22:6_22:4;O	-0.122069819	0.37088265
PE 44:10;O|PE 22:4_22:6;O	-0.08335911	0.21127883
PE 44:10;O2|PE 22:6_22:4;O2	-0.269778625	0.95348754
PE 44:10;O2|PE 22:4_22:6;O2	-0.279867381	1.24580747
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PI 22:0;O|PI 18:0_4:0;O	1.477266209	0.99524525
PI 36:5;O|PI 16:0_20:5;O	1.012968666	0.80154151
PI 36:5;O|PI 16:0_20:5;O	1.177319547	0.67270373
PI 36:4;O|PI 16:0_20:4;O	0.8575274	1.58064519
PI 36:4;O|PI 16:0_20:4;O	0.740183026	1.9226765
PI 36:4;O|PI 16:0_20:4;O	0.711666429	2.16133142
PI 36:4;O|PI 16:0_20:4;O	0.839677366	2.09130273
PI 36:4;O2|PI 16:0_20:4;O2	0.97968784	0.76442732
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PI 38:5;O|PI 18:0_20:5;O	0.922394133	0.67576116
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PI 38:4;O|PI 18:0_20:4;O	0.895508318	1.26677023
PI 36:4;O3|PI 16:0_20:4;O3	1.302264225	0.81828754
PI 38:4;O2|PI 18:0_20:4;O2	1.164307838	0.83666779
PI 38:4;O2|PI 18:0_20:4;O2	1.279554577	0.55178324
PI 38:4;O2|PI 18:0_20:4;O2	1.112642335	0.85855588
PI 40:7;O|PI 22:6_18:1;O	0.038688034	0.1116181
PI 40:6;O|PI 18:0_22:6;O	0.703720225	1.45981178
PI 38:5;O3|PI 18:0_20:5;O3	1.149673351	0.74321445
PI 38:5;O3|PI 18:0_20:5;O3	1.116083875	0.76472036
PI 38:4;O3|PI 18:0_20:4;O3	1.072335215	0.64341234
PI 38:4;O3|PI 18:0_20:4;O3	1.13100105	0.82859652
PI 38:4;O3|PI 18:0_20:4;O3	0.827123276	0.72737826
PI 38:4;O4|PI 18:0_20:4;O4	0.916269028	0.91574078
PE 32:2|PE 16:1_16:1	0.178430152	2.02072139
PE 34:3|PE 16:1_18:2	0.289843097	2.77120739
PE 34:2|PE 16:0_18:2	0.240797706	1.48391345
PE 34:2|PE 16:1_18:1	0.050339518	0.70513676

PE 34:1|PE 16:0_18:1	0.014867321	0.2309647
PE 34:0|PE 16:0_18:0	-0.226404892	1.27480759
PE 35:2|PE 17:1_18:1	0.293360536	0.76063824
PE 36:5|PE 16:0_20:5	0.298378114	2.58810073
PE 36:5|PE 16:1_20:4	0.033440716	0.23258258
PE 36:4|PE 16:0_20:4	0.080796107	1.11415518
PE 36:3|PE 16:0_20:3	0.054702174	0.70971212
PE 36:3|PE 18:1_18:2	0.158512142	0.80432417
PE 36:2|PE 18:1_18:1	-0.085344264	1.82959614
PE 36:1|PE 18:0_18:1	-0.031075041	0.26805979
PE 36:0|PE 18:0_18:0	-0.23280263	0.83131986
PE 37:4|PE 17:0_20:4	0.12036564	2.35350749
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PE 38:7|PE 16:1_22:6	-0.283484126	1.21695565
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PE 38:7|PE 18:3_20:4	-0.279843121	1.14800766
PE 38:6|PE 16:0_22:6	0.039362877	0.22340481
PE 38:6|PE 18:2_20:4	-0.156812743	1.3337343
PE 38:5|PE 18:1_20:4	-0.09162328	0.93128273
PE 38:4|PE 18:0_20:4	0.005793868	0.07849446
PE 38:3|PE 18:0_20:3	0.059551634	0.59827658
PE 38:2|PE 18:1_20:1	-0.113133107	0.54636687
PE 38:1|PE 18:0_20:1	-0.084174446	0.31391523
PE 39:4|PE 19:0_20:4	0.032260491	0.35306148
PE 40:8|PE 18:2_22:6	-0.223048018	1.64528429
PE 40:7|PE 18:1_22:6	-0.055527862	0.2304473
PE 40:6|PE 18:0_22:6	-0.115323166	2.59965686
PE 40:5|PE 18:0_22:5	-0.141297778	1.0214613
PE 40:4|PE 18:0_22:4	-0.004200822	0.0162979
PE 42:9|PE 20:3_22:6	-0.189008445	1.27958295
PE 42:8|PE 20:4_22:4	-0.016155833	0.04550795
PE 42:7|PE 20:1_22:6	-0.009688291	0.01988446
PE 42:5|PE 18:0_24:5	-0.083608272	1.04984501
PE 42:4|PE 18:0_24:4	-0.01711023	0.12750575
PE 42:1|PE 24:0_18:1	0.369378191	0.51668458
PE 44:12|PE 22:6_22:6	-0.240998184	1.2797264
PE 44:10|PE 22:4_22:6	-0.161845262	1.03875649
PE 46:12|PE 22:6_24:6	-0.272314108	1.45776212
PE 46:10|PE 24:4_22:6	-0.298481525	1.58240495
PG 30:0|PG 14:0_16:0	2.312241148	2.79846343
PG 31:0|PG 15:0_16:0	0.107350354	0.83930863
PG 32:2|PG 16:1_16:1	1.347621311	1.27389297
PG 32:2|PG 16:1_16:1	1.507982928	1.81107183
PG 32:2|PG 16:1_16:1	0.118698822	1.68739171
PG 32:1|PG 16:0_16:1	0.05410637	0.29475704
PG 32:1|PG 14:0_18:1	1.402063262	1.92933436
PG 32:0|PG 16:0_16:0	1.239259903	4.51281518
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PG 33:1|PG 15:0_18:1	0.128093908	0.6430626
PG 33:0|PG 16:0_17:0	0.756294654	3.04956696
PG 34:4|PG 18:1_16:3	1.75751	1.23635562
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PG 36:5|PG 16:1_20:4	-0.167709606	1.49951666
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PG 36:4|PG 16:0_20:4	1.332317069	1.90884266
PG 36:4|PG 18:2_18:2	1.383225102	1.61956454
PG 36:3|PG 16:0_20:3	1.135545891	1.75607069
PG 36:3|PG 18:1_18:2	0.033536	0.52432548
PG 36:2|PG 18:1_18:1	0.087012607	0.35644098
PG 36:2|PG 18:1_18:1	1.072488389	1.99068876
PG 37:4|PG 17:0_20:4	-0.090248539	0.42382974
PG 38:9|PG 16:3_22:6	2.159918508	2.05923018
PG 37:2|PG 18:1_19:1	0.926424065	1.93092722
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PG 38:5|PG 18:1_20:4	-0.127030277	1.03038395
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PG 38:5|PG 18:2_20:3	1.154163482	0.72891863
PG 38:4|PG 18:0_20:4	0.236523993	2.76896506
PG 38:4|PG 18:0_20:4	1.456070989	2.09482946
PG 38:4|PG 18:0_20:4	-0.119854605	1.2335505
PG 38:2|PG 18:1_20:1	1.132384532	4.01231555
PG 40:8|PG 20:4_20:4	1.449330959	3.50689841
PG 40:8|PG 18:2_22:6	1.378415222	1.48192489
PG 40:8|PG 18:2_22:6	0.011100762	0.11513379
PG 40:7|PG 20:3_20:4	1.322985373	1.77738096
PG 40:7|PG 18:1_22:6	1.259737189	1.70293009
PG 40:7|PG 18:1_22:6	-0.131559644	0.98818864
PG 40:6|PG 18:0_22:6	1.293526305	1.99341043
PG 40:6|PG 18:0_22:6	-0.142185183	1.99735312
PG 40:6|PG 18:1_22:5	1.809620762	2.12179194
PG 40:5|PG 18:1_22:4	1.353752005	1.96387636
PG 42:11|PG 20:5_22:6	1.732060165	2.40473818
PG 42:10|PG 20:4_22:6	1.276119699	2.79277833
PG 42:9|PG 20:4_22:5	0.820465827	1.05638276
PG 42:9|PG 20:3_22:6	1.321849354	1.68619843
PG 42:9|PG 20:4_22:5	1.331339184	1.47561087
PG 42:9|PG 20:3_22:6	-0.030299768	0.27139211
PG 42:8|PG 20:4_22:4	1.058637181	1.67791171
PG 42:7|PG 20:1_22:6	0.980856804	1.6176486
PG 44:12|PG 22:6_22:6	0.921804153	2.24274519
PG 44:11|PG 22:5_22:6	1.239430767	2.856195
PG 44:11|PG 22:5_22:6	1.451159784	2.06039058
PG 44:11|PG 22:5_22:6	1.788765577	3.14043235

PG 44:10|PG 22:4_22:6	1.346910702	0.71819606
PI 32:0|PI 16:0_16:0	-0.097819167	0.97441112
PI 34:4|PI 14:0_20:4	0.141707821	1.08050045
PI 34:2|PI 16:1_18:1	0.137102817	0.54403028
PI 34:1|PI 16:0_18:1	-0.169448509	0.7065381
PI 34:0|PI 16:0_18:0	0.006737344	0.02185851
PI 35:4|PI 15:0_20:4	0.181084145	1.21475296
PI 36:5|PI 16:1_20:4	-0.019886344	0.10518648
PI 36:4|PI 16:0_20:4	0.165122197	1.41544479
PI 36:3|PI 16:0_20:3	0.48898405	2.19435457
PI 36:3|PI 16:0_20:3	0.147127528	1.90708236
PI 36:2|PI 18:1_18:1	-0.033572928	0.35847425
PI 36:1|PI 18:0_18:1	0.074551527	0.47263599
PI 36:1|PI 18:0_18:1	0.110965768	0.49150331
PI 37:5|PI 17:1_20:4	-0.014272681	0.07267482
PI 37:4|PI 17:0_20:4	0.164841999	1.90758831
PI 38:6|PI 18:2_20:4	0.029056425	0.11597017
PI 38:5|PI 18:1_20:4	0.061502577	0.41459132
PI 38:4|PI 18:0_20:4	0.018256022	0.3187376
PI 38:3|PI 18:0_20:3	0.099918249	0.84964853
PI 39:6|PI 17:0_22:6	0.023940951	0.26008054
PI 39:5|PI 19:1_20:4	-0.038199583	0.0886274
PI 39:4|PI 19:0_20:4	0.22000455	1.91263924
PI 40:8|PI 20:4_20:4	0.00622472	0.01268333
PI 40:8|PI 20:4_20:4	-0.032295391	0.10761436
PI 40:7|PI 20:3_20:4	0.108984076	0.47930466
PI 40:7|PI 18:1_22:6	-0.001817536	0.00754888
PI 40:6|PI 18:0_22:6	-0.087943277	1.6866618
PI 40:6|PI 20:2_20:4	0.036064218	0.10183625
PI 40:5|PI 20:1_20:4	-0.043433572	0.93162657
PI 40:5|PI 18:0_22:5	-0.320904676	0.91886522
PI 40:4|PI 20:0_20:4	-0.011582012	0.10649494
PI 40:4|PI 18:0_22:4	0.104692129	0.76247446
PI 42:10|PI 20:4_22:6	-0.017802996	0.05519517
PI 42:9|PI 20:4_22:5	-0.069269028	0.09577194
PI 42:8|PI 20:4_22:4	0.057771416	0.23412907
PI 44:12|PI 22:6_22:6	-0.088841688	0.30332537
PI 44:10|PI 22:4_22:6	-0.094525149	0.27602841

Data Description: Fig. S10B - Lipid metabolite fold-change comparison between WT 24-month and PPT1 KO 7-month total brain (n = 3 biological replicates/genotype). AHexCer: acyl-hexosylceramide; Cer: ceramide; CL: cardiolipin; DG: diglyceride (diacylglycerol); EtherDG: ether-linked diglyceride; EtherLPC: ether-linked lysophosphatidylcholine; EtherLPE: ether-linked lysophosphatidylethanolamine; EtherLPG: ether-linked lysophosphatidylglycerol; EtherPC: ether-linked phosphatidylcholine; EtherPE: ether-linked phosphatidylethanolamine; EtherPG: ether-linked phosphatidylglycerol; EtherPI: ether-linked phosphatidylinositol; HexCer: hexosylceramide; LPC: lysophosphatidylcholine; LPE: lysophosphatidylethanolamine; LPG: lysophosphatidylglycerol; LPI: lysophosphatidylinositol; OxPE: oxidized phosphatidylethanolamine; OxPI: oxidized phosphatidylinositol; PC: phosphatidylcholine; PE: phosphatidylethanolamine; PG/BMP: phosphatidylglycerol/bis(monoacylglycero)phosphate; PI: phosphatidylinositol; SHexCer: sulfatide;

Fig. S10B - Whole Brain Lipid Metabolite Fold Change - PPT1 KO-7/WT-24		
Lipid Annotation	**$\log_{10}$(PPT1 KO/WT)**	**-$\log_{10}$(p-value)**
AHexCer 52:1;O2|AHexCer (O-16:0)18:1;O2/18:0	0.092932808	0.33196508
AHexCer 54:1;O2|AHexCer (O-18:0)18:1;O2/18:0	0.067934092	0.22418819
AHexCer 56:2;O2|AHexCer (O-17:1)18:1;O2/21:0	-0.109915285	0.49746188
AHexCer 57:1;O2|AHexCer (O-16:0)18:1;O2/23:0	-0.254646747	1.64196095
AHexCer 58:1;O2|AHexCer (O-16:0)18:1;O2/24:0	0.018945455	0.07878622
AHexCer 58:2;O2|AHexCer (O-16:0)18:1;O2/24:1	-0.182159664	1.48909627
AHexCer 58:2;O2|AHexCer (O-16:0)18:1;O2/24:1	-0.343772618	3.08050584
AHexCer 59:1;O2|AHexCer (O-18:0)18:1;O2/23:0	-0.176944966	1.21282153
AHexCer 59:2;O2|AHexCer (O-18:0)18:1;O2/23:1	-0.400923296	2.20422243
AHexCer 60:3;O2|AHexCer (O-18:1)18:1;O2/24:1	-0.145202526	1.14828473
AHexCer 68:2;O2|AHexCer (O-26:0)18:1;O2/24:1	-0.150339591	0.38769168
Cer 42:0;O4|Cer 18:0;O3/24:0(2OH)	0.303806736	1.44240988
Cer 42:0;O4|Cer 18:0;O3/24:0(2OH)	0.249188844	0.56543637
Cer 38:0;O3|Cer 18:0;O2/20:0;O	0.571980494	0.9256583
Cer 40:0;O3|Cer 18:0;O2/22:0;O	1.318584071	2.05621545
Cer 41:0;O3|Cer 18:0;O2/23:0;O	1.054756167	1.50687417
Cer 41:0;O3|Cer 18:0;O2/23:0;O	0.111423304	0.36585903
Cer 41:0;O3|Cer 18:0;O2/23:0;O	0.15902313	0.48116671
Cer 42:0;O3|Cer 18:0;O2/24:0;O	1.167059335	1.63919085
Cer 43:0;O3|Cer 18:0;O2/25:0;O	0.036727688	0.08552897
Cer 36:1;O3|Cer 18:1;O2/18:0;O	-0.006570536	0.03089296
Cer 36:1;O3|Cer 18:1;O2/18:0;O	1.037891485	1.14500682
Cer 38:1;O3|Cer 18:1;O2/20:0;O	1.041834495	1.36931534
Cer 39:4;O3|Cer 18:2;O2/21:2;O	0.130423879	0.60224898
Cer 40:1;O3|Cer 18:1;O2/22:0;O	0.027908726	0.15531623
Cer 41:1;O3|Cer 18:1;O2/23:0;O	-0.107941188	0.8940592
Cer 42:2;O3|Cer 18:1;O2/24:1;O	0.812850135	2.12157401
Cer 36:0;O2|Cer 18:0;O2/18:0	0.052746075	0.62544307
Cer 42:1;O2|Cer 18:0;O2/24:1	0.373006913	2.96063317
Cer 34:1;O2|Cer 18:1;O2/16:0	0.035102117	0.16827478
Cer 36:1;O2|Cer 18:1;O2/18:0	-0.073120885	0.86324004
Cer 36:2;O2|Cer 18:1;O2/18:1	-0.000140963	0.00064531
Cer 37:1;O2|Cer 18:1;O2/19:0	-0.041744313	0.3746643
Cer 38:1;O2|Cer 20:1;O2/18:0	-0.013989805	0.09611746
Cer 38:2;O2|Cer 18:1;O2/20:1	-0.083484885	1.60610371
Cer 38:2;O2|Cer 18:1;O2/20:1	1.377925398	1.78133488
Cer 38:2;O2|Cer 18:1;O2/20:1	-0.092722509	1.86725612

Cer 39:2;O2|Cer 18:1;O2/21:1	0.085078923	0.32958114
Cer 40:1;O2|Cer 18:1;O2/22:0	0.239337187	0.60212162
Cer 40:1;O2|Cer 18:1;O2/22:0	0.110227884	1.50452852
Cer 40:2;O2|Cer 18:1;O2/22:1	0.016367952	0.18993842
Cer 40:2;O2|Cer 18:1;O2/22:1	0.750479528	1.77956532
Cer 41:1;O2|Cer 18:1;O2/23:0	0.013281475	0.04377055
Cer 41:1;O2|Cer 18:1;O2/23:0	0.26363987	1.07389515
Cer 41:2;O2|Cer 18:1;O2/23:1	-0.060492012	0.74197995
Cer 41:2;O2|Cer 18:1;O2/23:1	0.838771813	1.8269279
Cer 41:3;O2|Cer 18:2;O2/23:1	0.10740623	0.62151579
Cer 42:1;O2|Cer 18:1;O2/24:0	0.415027153	1.4496875
Cer 42:2;O2|Cer 18:1;O2/24:1	0.083998646	0.31574698
Cer 42:2;O2|Cer 18:1;O2/24:1	0.946824011	1.74897756
Cer 42:2;O2|Cer 18:1;O2/24:1	-0.01985926	0.40905352
Cer 42:3;O2|Cer 18:1;O2/24:2	0.942655943	1.9357548
Cer 42:3;O2|Cer 18:1;O2/24:2	-0.046164942	0.56816402
Cer 44:2;O2|Cer 20:1;O2/24:1	0.157991883	0.57218771
DG 30:0|DG 14:0_16:0	0.317074362	2.11696912
DG 32:0|DG 16:0_16:0	0.278368389	0.82078926
DG 32:1|DG 14:0_18:1	0.32196458	2.94751119
DG 33:0|DG 16:0_17:0	0.093326086	0.53487746
DG 33:1|DG 16:0_17:1	0.355585049	2.57132102
DG 34:0|DG 16:0_18:0	0.229393276	0.76979634
DG 34:1|DG 16:0_18:1	0.238754006	2.47986313
DG 34:2|DG 16:1_18:1	0.228592303	4.11220042
DG 35:0|DG 17:0_18:0	0.149568617	0.56268175
DG 35:1|DG 17:0_18:1	0.259864302	1.78850637
DG 36:0|DG 18:0_18:0	0.171546678	0.54390099
DG 36:1|DG 18:0_18:1	0.146794993	1.16199585
DG 36:3|DG 18:0_18:3	0.278303085	2.51507301
DG 36:4|DG 18:2_18:2	0.356487374	1.7122617
DG 36:5|DG 16:0_20:5	0.336078441	1.86064596
DG 36:5|DG 16:1_20:4	0.213423009	2.32209366
DG 36:6|DG 18:3_18:3	0.172390964	0.84843013
DG 37:0|DG 16:0_21:0	0.061956579	0.45222287
DG 37:1|DG 19:0_18:1	0.16901043	0.8191092
DG 37:2|DG 18:1_19:1	0.086026447	0.25741846
DG 37:4|DG 17:0_20:4	0.069261224	0.12727587
DG 38:0|DG 18:0_20:0	-0.14731868	0.86305951
DG 38:1|DG 20:0_18:1	0.037309141	0.10996449
DG 38:2|DG 18:1_20:1	0.060806016	0.37741843
DG 38:3|DG 18:0_20:3	0.056821824	0.12911189
DG 38:3|DG 18:0_20:3	-0.060441919	0.14063668
DG 38:4|DG 18:1_20:3	0.133066137	0.82187317
DG 38:6|DG 16:0_22:6	0.188571846	1.0444491
DG 39:0|DG 16:0_23:0	0.111717257	1.12279278
DG 39:1|DG 21:0_18:1	0.22711251	0.94868366
DG 39:2|DG 16:1_23:1	0.037415675	0.16274746
DG 40:0|DG 16:0_24:0	0.149416037	0.91287057
DG 40:1|DG 22:0_18:1	0.20286017	0.93093206
DG 40:2|DG 18:1_22:1	0.034595637	0.10003775
DG 40:4|DG 18:0_22:4	0.004969439	0.01534532

DG 40:5|DG 20:1_20:4	-0.03718182	0.14608539
DG 40:6|DG 18:0_22:6	0.124117611	0.40679905
DG 41:0|DG 16:0_25:0	0.203443418	0.74616279
DG 41:1|DG 23:0_18:1	0.354039648	1.66775425
DG 41:2|DG 18:1_23:1	0.04708616	0.31746882
DG 42:1|DG 24:0_18:1	0.337426333	1.54484729
DG 42:2|DG 18:1_24:1	0.204348816	0.79476736
DG 42:3|DG 18:1_24:2	0.299533403	1.18459696
DG 42:4|DG 18:0_24:4	0.088315447	0.23849552
DG 42:7|DG 18:1_24:6	0.321442223	0.55381087
DG 43:1|DG 25:0_18:1	0.377994173	2.17688538
DG 44:1|DG 26:0_18:1	0.307646122	1.45036941
DG 44:2|DG 20:1_24:1	0.237548582	1.12491891
DG O-36:2|DG O-19:1_17:1	-0.042003923	0.08202057
DG O-38:7|DG O-16:1_22:6	0.131860729	0.39597591
DG O-40:5|DG O-18:1_22:4	0.256204916	1.23430341
DG O-40:7|DG O-18:1_22:6	0.142376591	0.8071628
DG O-40:8|DG O-18:2_22:6	-0.013230422	0.04321316
LPC O-18:1	0.550629376	0.96569529
LPC O-18:2	0.090765128	0.2928792
LPE O-16:0	0.997134273	1.96707711
LPE O-20:4	0.330698846	1.16901448
LPE P-16:1	0.54124699	2.58228121
LPE P-18:1	0.390430815	2.62129659
LPE P-18:2	0.391709844	2.15022672
LPE P-18:2	0.137687742	0.67562967
LPE P-18:2	0.138692199	0.68732602
LPE P-18:3	0.372315145	1.30984188
PC O-30:0|PC O-16:0_14:0	0.238659846	3.70411244
PC O-32:0|PC O-16:0_16:0	0.059690744	0.74317762
PC O-32:1|PC O-16:0_16:1	0.255440711	3.56527862
PC O-32:1|PC O-16:1_16:0	-0.000731139	0.01390159
PC O-34:1|PC O-16:0_18:1	0.049267565	0.99174333
PC O-34:1|PC O-18:1_16:0	-0.062111516	0.67457074
PC O-34:2|PC O-16:1_18:1	-0.164943878	0.42786237
PC O-35:6|PC O-16:2_19:4	1.179534521	0.93250236
PC O-36:0|PC O-20:0_16:0	0.177934623	1.08033188
PC O-36:1|PC O-16:1_20:0	0.105483489	0.61179698
PC O-36:1|PC O-18:0_18:1	0.080923157	1.95668573
PC O-36:1|PC O-18:1_18:0	0.257579646	0.87999836
PC O-36:2|PC O-18:1_18:1	0.094107573	0.44397946
PC O-36:2|PC O-18:1_18:1	-0.045476512	0.46120352
PC O-36:3|PC O-18:3_18:0	-0.196154214	0.86536534
PC O-38:2|PC O-18:1_20:1	-0.163362517	0.37813058
PC O-38:3|PC O-20:3_18:0	-0.209048478	3.04981431
PC O-38:4|PC O-16:0_22:4	0.164443782	1.50228573
PC O-38:5|PC O-18:1_20:4	-0.011773259	0.12008363
PC O-38:5|PC O-18:1_20:4	0.345342075	4.36081836
PC O-40:5|PC O-18:0_22:5	0.154533678	0.81082354
PC O-40:6|PC O-18:0_22:6	0.036841299	0.46849864
PC O-40:7|PC O-18:1_22:6	-0.153952863	2.10600346
HexCer 40:0;O4|HexCer 18:0;O3/22:0(2OH)	0.141725715	0.53929832

HexCer 42:0;O4|HexCer 18:0;O3/24:0(2OH)	0.194175439	1.13363909
HexCer 39:2;O3|HexCer 18:1;O2/21:1;O	-0.413543016	3.19864152
HexCer 34:1;O2|HexCer 18:1;O2/16:0	0.147965096	1.34737626
HexCer 36:1;O2|HexCer 18:1;O2/18:0	0.201950458	1.30328035
HexCer 36:1;O2|HexCer 18:1;O2/18:0	0.4674889	2.75704285
HexCer 36:2;O2|HexCer 18:1;O2/18:1	0.336955612	2.09843044
HexCer 36:2;O2|HexCer 18:2;O2/18:0	0.083746783	1.28387832
HexCer 38:1;O2|HexCer 18:1;O2/20:0	0.080384513	0.57352724
HexCer 38:2;O2|HexCer 18:1;O2/20:1	-0.052647246	0.29612587
HexCer 39:1;O2|HexCer 18:1;O2/21:0	-0.022849044	0.09244331
HexCer 39:2;O2|HexCer 18:1;O2/21:1	-0.208418717	1.10628522
HexCer 40:1;O2|HexCer 18:1;O2/22:0	0.130407473	1.20185671
HexCer 40:2;O2|HexCer 18:1;O2/22:1	0.132134908	1.90822113
HexCer 40:2;O2|HexCer 18:1;O2/22:1	0.000881768	0.00479065
HexCer 40:2;O2|HexCer 18:1;O2/22:1	0.034954463	0.623494
HexCer 41:1;O2|HexCer 18:1;O2/23:0	0.025841617	0.12481644
HexCer 41:1;O2|HexCer 18:1;O2/23:0	-0.005240491	0.02741912
HexCer 41:2;O2|HexCer 18:1;O2/23:1	-0.113455104	0.9193807
HexCer 41:2;O2|HexCer 18:1;O2/23:1	-0.14369123	1.69413863
HexCer 42:1;O2|HexCer 18:1;O2/24:0	0.103349614	0.80556971
HexCer 42:2;O2|HexCer 18:1;O2/24:1	0.01957872	0.12785737
HexCer 42:2;O2|HexCer 18:1;O2/24:1	0.043420777	1.21902674
HexCer 42:2;O2|HexCer 18:1;O2/24:1	0.003472198	0.05953633
HexCer 42:3;O2|HexCer 18:1;O2/24:2	-0.058391903	0.95798306
HexCer 42:3;O2|HexCer 18:1;O2/24:2	-0.171802467	0.72665113
HexCer 42:4;O2|HexCer 18:2;O2/24:2	-0.082752732	1.30985682
HexCer 43:2;O2|HexCer 18:1;O2/25:1	-0.022504744	0.10226269
HexCer 44:1;O2|HexCer 18:1;O2/26:0	0.363952711	1.42510186
HexCer 44:2;O2|HexCer 18:1;O2/26:1	0.10949862	1.3003281
HexCer 44:2;O2|HexCer 20:1;O2/24:1	0.233801481	1.08313767
HexCer 44:3;O2|HexCer 18:1;O2/26:2	0.064916851	0.37093754
LPC 14:0/0:0	0.382452323	2.59128498
LPC 16:0	0.314462886	2.29674637
LPC 16:0/0:0	0.356561668	3.15167916
LPC 16:1	0.241166298	0.63175585
LPC 16:1	0.327419487	1.52598232
LPC 16:1/0:0	0.41174525	2.91331855
LPC 17:0/0:0	0.350437566	3.65810139
LPC 18:0	0.194331377	2.0389205
LPC 18:0/0:0	0.249210462	1.74008073
LPC 18:1	0.165973881	2.13870519
LPC 18:1/0:0	0.07996524	0.2366381
LPC 18:1/0:0	0.238114252	1.90399533
LPC 18:2	0.191316818	0.92731538
LPC 18:2/0:0	0.106589016	0.61299713
LPC 19:0/0:0	0.218608818	1.94471892
LPC 20:0	0.101552345	1.00462592
LPC 20:0/0:0	0.103841441	1.09636038
LPC 20:0/0:0	0.132693371	2.33558189
LPC 20:1	-0.03179933	0.37827638
LPC 20:1/0:0	0.101436531	1.55474375
LPC 20:2	0.158299353	0.69743274

LPC 20:2/0:0	0.223328406	1.8446703
LPC 20:3/0:0	0.174498486	1.79892198
LPC 20:4	-0.096631584	0.89840726
LPC 20:4/0:0	0.179004041	2.55076331
LPC 22:1/0:0	0.101596831	1.44069724
LPC 22:4/0:0	0.025690796	0.21098977
LPC 22:5	-0.299217011	1.09672935
LPC 22:5	0.181243984	0.92090321
LPC 22:5/0:0	0.380766589	1.9269487
LPC 22:5/0:0	-0.132097211	0.77482684
LPC 22:6	-0.327720686	2.89020377
LPC 22:6/0:0	-0.086230495	0.6701501
LPC 23:0/0:0	0.274633314	3.28979425
LPC 24:0/0:0	0.175766494	2.22357001
LPC 24:1	0.216419637	2.39881817
LPC 24:4/0:0	0.2354259	0.51963071
LPC 24:6/0:0	-0.068815728	0.10753273
LPC 25:0/0:0	0.313002388	2.76340408
LPC 26:1/0:0	0.091285751	0.71169877
LPE 16:0	0.447467294	2.42267913
LPE 16:1	0.468883494	3.85086746
LPE 17:0	0.56335605	2.97020222
LPE 18:0	0.428302833	2.30120537
LPE 18:0	0.382279433	2.82187777
LPE 18:1	0.3479962	2.73069772
LPE 18:1	-0.017580733	0.17866404
LPE 18:2	0.43658031	2.0229972
LPE 18:2	0.620084762	1.02421548
LPE 19:1	0.200180026	0.7420804
LPE 20:1	0.328675239	2.56800347
LPE 20:1	-0.099301277	1.61245138
LPE 20:4	0.248056551	1.71009787
LPE 20:4	0.515176968	2.71672897
LPE 22:4	0.391808216	2.05622781
LPE 22:4	0.109465643	2.03797181
LPE 22:5	0.351210091	2.06422436
LPE 22:6	0.378160344	2.21900691
LPE 22:6	0.169338645	1.63654356
LPE 24:6	0.123334461	1.43873723
PC 32:0|PC 16:0_16:0	0.013376952	0.10976287
PC 32:1|PC 16:0_16:1	0.156009184	2.88593919
PC 32:1|PC 16:0_16:1	0.23221522	3.71179258
PC 32:2|PC 16:1_16:1	0.139379624	0.49707279
PC 34:0|PC 16:0_18:0	0.030333872	0.28659476
PC 34:1|PC 16:0_18:1	0.104778159	0.76641038
PC 34:1|PC 16:0_18:1	0.031272096	0.2052465
PC 34:2|PC 16:0_18:2	0.123539142	2.16757194
PC 34:2|PC 16:1_18:1	0.106332918	1.82076557
PC 34:3|PC 16:0_18:3	0.209390578	1.87262396
PC 34:4|PC 14:0_20:4	-0.002062533	0.00490821
PC 35:4|PC 15:0_20:4	0.083302021	0.21598209
PC 36:1|PC 18:0_18:1	0.073851347	1.11584872

PC 36:2|PC 18:0_18:2	0.082987908	1.07297672
PC 36:2|PC 18:1_18:1	0.014336294	0.16746004
PC 36:3|PC 16:0_20:3	0.064857804	1.36731427
PC 36:3|PC 16:0_20:3	0.183698167	2.52441735
PC 36:3|PC 16:0_20:3	0.039874324	0.78037654
PC 36:4|PC 16:0_20:4	0.085745588	2.11231877
PC 36:4|PC 18:2_18:2	0.15054538	0.57934545
PC 36:5|PC 16:0_20:5	0.090730471	0.25406502
PC 36:5|PC 16:1_20:4	-0.052267527	0.15326124
PC 36:6|PC 14:0_22:6	-0.091728653	0.24691995
PC 37:2|PC 18:1_19:1	-0.085998122	1.39958536
PC 38:2|PC 18:1_20:1	-0.059573637	0.57834738
PC 38:3|PC 18:0_20:3	-0.018697316	0.28095095
PC 38:3|PC 18:0_20:3	0.126647235	1.54064244
PC 38:4|PC 18:0_20:4	0.027600885	0.35359467
PC 38:4|PC 18:1_20:3	0.091678559	1.34308794
PC 38:5|PC 18:1_20:4	-0.036772667	0.40493618
PC 38:6|PC 18:2_20:4	-0.140716017	0.55952677
PC 38:7|PC 16:1_22:6	-0.16876147	0.45475772
PC 39:1|PC 21:0_18:1	0.079665822	0.78649646
PC 39:4|PC 17:0_22:4	0.02116113	0.1435386
PC 39:4|PC 19:0_20:4	0.067179164	0.69029838
PC 39:5|PC 19:1_20:4	-0.135744805	1.44907234
PC 39:6|PC 17:0_22:6	-0.040082461	0.81916329
PC 40:0|PC 16:0_24:0	0.123735561	0.4379077
PC 40:2|PC 20:1_20:1	-0.04448489	0.91100685
PC 40:5|PC 18:0_22:5	-0.132731393	2.1367896
PC 40:6|PC 16:0_24:6	-0.043523057	0.37139452
PC 40:6|PC 20:2_20:4	-0.087973233	1.13630852
PC 40:7|PC 18:1_22:6	-0.256960018	1.31523184
PC 40:8|PC 18:2_22:6	-0.583995251	1.66668545
PC 41:1|PC 23:0_18:1	0.081652971	0.30579654
PC 41:6|PC 19:0_22:6	-0.045939779	0.62333955
PC 42:1|PC 24:0_18:1	0.210044666	1.63562974
PC 42:10|PC 20:4_22:6	-0.365157659	0.78913885
PC 42:4|PC 22:0_20:4	0.066921345	1.60840622
PC 42:6|PC 18:0_24:6	-0.076532816	0.68897469
PC 42:7|PC 20:1_22:6	-0.273255971	2.10205978
PC 42:9|PC 20:4_22:5	-0.461550733	0.69828335
PC 43:1|PC 25:0_18:1	0.122432	0.56943222
PC 43:2|PC 18:1_25:1	-0.227769043	0.57467151
PC 44:11|PC 22:5_22:6	-0.496318264	0.78016795
PC 44:5|PC 24:1_20:4	0.014549203	0.32131548
SHexCer 36:1;O3|SHexCer 18:1;O2/18:0;O	0.34505494	2.97277778
SHexCer 38:1;O3|SHexCer 18:1;O2/20:0;O	0.03887908	0.30050284
SHexCer 38:2;O3|SHexCer 18:2;O2/20:0;O	-0.341291907	0.89867345
SHexCer 40:1;O3|SHexCer 18:1;O2/22:0;O	0.030030184	0.16424637
SHexCer 40:2;O3|SHexCer 18:1;O2/22:1;O	-0.089994035	2.05269442
SHexCer 41:0;O3|SHexCer 18:0;O2/23:0;O	0.065947417	0.2835789
SHexCer 41:1;O3|SHexCer 18:1;O2/23:0;O	-0.168029318	1.03004259
SHexCer 41:2;O3|SHexCer 18:1;O2/23:1;O	-0.385330784	3.22173748
SHexCer 42:1;O3|SHexCer 18:1;O2/24:0;O	0.133945522	0.97096044

SHexCer 42:1;O3|SHexCer 18:1;O2/24:0;O	0.015789732	0.09381425
SHexCer 42:2;O3|SHexCer 18:1;O2/24:1;O	-0.100679561	0.55651189
SHexCer 42:3;O3|SHexCer 18:2;O2/24:1;O	-0.021992115	0.67752028
SHexCer 43:1;O3|SHexCer 18:1;O2/25:0;O	-0.128678714	0.60909185
SHexCer 43:2;O3|SHexCer 18:1;O2/25:1;O	-0.397286789	1.45815334
SHexCer 44:2;O3|SHexCer 18:1;O2/26:1;O	0.009018132	0.06356735
SM 26:1;O3	0.212900569	1.79646776
SM 29:2;O3	1.779404992	0.62705642
SM 34:2;O3	0.027881515	0.0405474
SM 44:3;O2|SM 18:1;O2/26:2	0.33236593	3.20395436
TG 48:1|TG 16:0_16:0_16:1	0.287282751	3.29417801
TG 48:2|TG 14:0_16:1_18:1	0.184483303	0.89168899
TG 49:0|TG 16:0_16:0_17:0	0.374475328	0.67301368
TG 49:3|TG 15:0_16:1_18:2	0.306687177	0.65469412
TG 50:0|TG 16:0_16:0_18:0	0.191333715	0.76254446
TG 50:1|TG 16:0_16:0_18:1	0.196231164	1.7096327
TG 50:2|TG 16:0_16:1_18:1	0.230803318	2.70122672
TG 50:3|TG 16:1_16:1_18:1	0.123856069	1.11492402
TG 50:4|TG 16:0_18:1_16:3	0.287323604	0.77834806
TG 51:0|TG 16:0_17:0_18:0	0.412899514	0.61785688
TG 52:0|TG 16:0_18:0_18:0	0.186399366	0.83919259
TG 52:1|TG 16:0_18:0_18:1	0.11068173	0.9168834
TG 52:2|TG 16:0_18:1_18:1	0.193951525	2.44022476
TG 52:3|TG 16:0_18:1_18:2	0.141921576	1.5684732
TG 52:4|TG 16:1_18:1_18:2	-0.018402773	0.11798177
TG 52:5|TG 16:1_18:2_18:2	0.213399666	1.81747243
TG 52:6|TG 14:0_16:0_22:6	0.154713995	0.94526351
TG 52:6|TG 16:1_18:2_18:3	0.147083366	0.91460493
TG 53:0|TG 16:0_18:0_19:0	0.339428609	0.79571049
TG 53:1|TG 16:0_18:0_19:1	0.175747361	2.07108912
TG 53:2|TG 16:0_18:1_19:1	0.219288867	1.67258342
TG 53:4|TG 17:0_18:2_18:2	0.189588319	1.05116842
TG 54:0|TG 16:0_18:0_20:0	0.228334728	0.77902344
TG 54:1|TG 16:0_18:0_20:1	0.09408289	0.49592379
TG 54:2|TG 16:0_18:1_20:1	0.175544822	1.52085862
TG 54:3|TG 18:0_18:1_18:2	0.229703487	1.95601435
TG 54:5|TG 18:1_18:2_18:2	0.201258191	1.65178578
TG 54:6|TG 16:0_16:0_22:6	0.119274191	0.74842556
TG 54:6|TG 18:1_18:2_18:3	0.215493328	1.44541269
TG 54:7|TG 18:2_18:2_18:3	0.250985466	2.15026953
TG 54:8|TG 18:2_18:3_18:3	0.238910555	0.92523308
TG 55:1|TG 16:0_21:0_18:1	0.181538695	1.10654194
TG 55:2|TG 16:0_18:1_21:1	0.178642891	1.48013657
TG 56:0|TG 14:0_18:0_24:0	0.255087058	0.88333114
TG 56:0|TG 15:0_15:0_26:0	0.401904221	0.86108057
TG 56:1|TG 16:0_16:0_24:1	0.093825291	0.53401834
TG 56:10|TG 14:0_20:4_22:6	-0.406296916	0.99260543
TG 56:2|TG 16:0_18:1_22:1	0.042584895	0.14377277
TG 56:2|TG 18:0_18:1_20:1	0.121728418	1.17699072
TG 56:3|TG 18:0_18:0_20:3	0.22310566	0.76035164
TG 56:4|TG 16:0_18:0_22:4	0.140422175	0.72239076
TG 56:6|TG 16:0_18:1_22:5	0.015772059	0.13407466

TG 56:7|TG 16:0_18:1_22:6	-0.0365095	0.31552044
TG 57:0|TG 16:0_18:0_23:0	0.346632754	0.94529187
TG 57:1|TG 16:0_23:0_18:1	0.224368101	1.61438353
TG 58:0|TG 16:0_18:0_24:0	0.176077564	1.148401
TG 58:1|TG 16:0_18:0_24:1	0.153077075	0.89344178
TG 58:2|TG 16:0_18:1_24:1	0.135054541	1.55165962
TG 58:3|TG 18:1_18:1_22:1	0.129569814	1.21655167
TG 58:4|TG 18:0_18:0_22:4	0.127189125	0.73038293
TG 58:6|TG 18:0_18:0_22:6	0.093819645	0.55221736
TG 58:7|TG 16:0_20:1_22:6	-0.073040311	0.57219904
TG 58:8|TG 18:1_18:1_22:6	-0.406937504	3.78670617
TG 59:3|TG 18:1_18:1_23:1	-0.217823547	0.90997848
TG 60:0|TG 16:0_20:0_24:0	0.343858566	1.06093282
TG 60:2|TG 18:0_18:1_24:1	0.170952664	1.08872341
TG 60:3|TG 18:1_18:1_24:1	0.180379333	1.45562453
TG 60:7|TG 16:0_22:1_22:6	-0.168594541	0.60835237
TG 61:3|TG 18:1_18:1_25:1	-0.256366834	0.7384447
TG 62:12|TG 18:0_22:6_22:6	-0.278605235	2.31855019
TG 62:3|TG 18:1_20:1_24:1	0.30099176	0.87634389
CL 68:7|CL 16:1_16:1_16:1_20:4	0.257606003	0.22142452
CL 68:4|CL 16:0_18:2_16:1_18:1	0.275746935	3.40957184
CL 68:3|CL 16:0_18:1_16:1_18:1	0.242902919	2.26768342
CL 68:2|CL 16:0_18:1_18:0_16:1	-0.281610109	0.89371703
CL 68:2|CL 16:0_18:1_16:0_18:1	0.31421664	0.53633883
CL 69:4|CL 16:1_18:1_17:1_18:1	0.740570242	0.87925902
CL 70:8|CL 16:1_18:2_16:1_20:4	-0.280463689	1.51627884
CL 70:6|CL 16:0_18:1_16:1_20:4	0.05432479	0.40407025
CL 70:5|CL 16:1_18:1_18:1_18:2	0.191412217	2.09377466
CL 70:4|CL 18:0_18:2_16:1_18:1	0.179422924	2.46099694
CL 70:4|CL 16:1_18:1_18:1_18:1	0.268536138	3.02114256
CL 70:3|CL 16:0_18:1_18:1_18:1	0.22621279	1.9163896
CL 71:5|CL 17:1_18:1_18:1_18:2	0.593674965	1.22535635
CL 72:10|CL 16:1_20:4_16:1_20:4	-0.101199384	0.4067105
CL 72:9|CL 16:0_20:4_16:1_20:4	-0.157349409	0.35552519
CL 72:8|CL 16:1_18:1_18:2_20:4	-0.004050108	0.02236333
CL 72:7|CL 16:0_18:2_18:1_20:4	0.071295608	0.35784582
CL 72:6|CL 18:1_18:2_18:1_18:2	0.034864115	0.21977642
CL 72:5|CL 18:1_18:1_18:1_18:2	0.129277302	2.00577818
CL 72:4|CL 18:1_18:1_18:1_18:1	0.151766074	1.71729963
CL 73:7|CL 17:1_18:1_18:1_20:4	0.03302713	0.1057882
CL 74:12|CL 16:1_20:4_16:1_22:6	-0.475542459	0.6147618
CL 74:11|CL 16:1_20:4_18:2_20:4	-0.120111589	0.84129604
CL 74:10|CL 16:1_20:4_18:1_20:4	-0.050953357	0.20044733
CL 74:9|CL 16:0_18:2_18:1_22:6	-0.057502189	0.22739731
CL 74:9|CL 16:1_18:1_20:3_20:4	-0.055561153	0.39563187
CL 74:8|CL 18:1_18:2_18:1_20:4	-0.015946989	0.0935013
CL 74:8|CL 18:1_18:1_18:2_20:4	0.215946858	0.49284584
CL 74:7|CL 18:1_18:2_18:1_20:3	-0.011208688	0.09469448
CL 74:7|CL 18:1_18:1_18:1_20:4	0.053161713	0.31168448
CL 74:7|CL 18:0_18:2_18:1_20:4	0.052245666	0.27171279
CL 75:10|CL 17:1_20:4_18:1_20:4		1.27004104
CL 76:13|CL 16:1_20:4_18:2_22:6	-0.200911834	0.70600401

CL 76:12|CL 16:1_20:4_18:1_22:6	-0.382935414	4.95073523
CL 76:11|CL 18:1_20:4_18:2_20:4	-0.102642329	0.47364679
CL 76:10|CL 18:1_20:4_18:2_20:3	-0.070228812	0.33547497
CL 76:9|CL 18:0_18:2_20:3_20:4	-0.094026731	0.48571909
CL 78:15|CL 16:1_20:4_20:4_22:6	-0.489508216	1.18053033
CL 78:13|CL 18:1_20:4_18:2_22:6	-0.174887366	0.75934572
CL 78:12|CL 18:1_20:4_18:1_22:6	-0.136535371	0.66019315
CL 80:15|CL 18:1_20:4_20:4_22:6	-0.232178685	0.85438156
CL 80:14|CL 18:1_22:6_18:1_22:6	-0.219232571	0.98431993
CL 82:18|CL 18:2_22:6_20:4_22:6	-0.930936805	1.50717926
CL 82:14|CL 18:1_22:6_20:3_22:4	-1.058328862	1.43291474
CL 84:20|CL 20:4_22:6_20:4_22:6	-0.826733577	2.36753794
CL 84:19|CL 18:1_22:6_22:6_22:6	-0.47337328	1.31421638
LPG O-20:2	0.240514972	0.80876088
PE O-32:2|PE O-18:2_14:0	0.008392677	0.08708373
PE O-32:1|PE O-16:1_16:0	-0.068041359	0.80451615
PE O-32:1|PE O-16:0_16:1	0.350505914	1.64910827
PE O-32:0|PE O-16:0_16:0	-0.100434936	0.53784533
PE O-33:1|PE O-17:1_16:0	-0.091878372	0.31751236
PE O-34:5|PE O-14:1_20:4	0.304211872	0.59096331
PE O-34:3|PE O-16:1_18:2	0.013835797	0.19888559
PE O-34:2|PE O-16:1_18:1	0.055501897	1.03796077
PE O-34:1|PE O-16:0_18:1	-0.055980211	0.61197135
PE O-34:0|PE O-18:0_16:0	-0.002644923	0.00728007
PE O-35:3|PE O-18:2_17:1	-0.092829758	2.61349602
PE O-35:1|PE O-17:0_18:1	-0.189012082	1.3910375
PE O-36:6|PE O-16:1_20:5	0.12359116	1.61807713
PE O-36:5|PE O-16:1_20:4	0.019051715	0.40850433
PE O-36:4|PE O-16:0_20:4	0.028679901	0.61399604
PE O-36:4|PE O-16:1_20:3	-0.040813003	0.62696465
PE O-36:3|PE O-18:2_18:1	-0.101203143	1.54175612
PE O-36:2|PE O-18:1_18:1	0.056168405	0.88143929
PE O-36:0|PE O-20:0_16:0	-0.020076844	0.17166552
PE O-37:6|PE O-17:2_20:4	-0.155207835	2.37524682
PE O-37:5|PE O-17:1_20:4	0.02176301	0.21619207
PE O-37:4|PE O-17:1_20:3	-0.011223591	0.08920508
PE O-37:3|PE O-18:2_19:1	-0.225849826	1.88859277
PE O-37:2|PE O-17:1_20:1	-0.06569861	0.42353941
PE O-38:8|PE O-16:2_22:6	-0.262808666	1.16609464
PE O-38:7|PE O-16:1_22:6	-0.11733147	1.81325234
PE O-38:6|PE O-20:5_18:1	0.156738313	3.81409442
PE O-38:6|PE O-18:2_20:4	-0.107885019	4.53472467
PE O-38:5|PE O-18:1_20:4	0.039651643	1.93435183
PE O-38:5|PE O-16:1_22:4	-0.042941787	1.29377344
PE O-38:5|PE O-18:2_20:3	-0.005400045	0.04422618
PE O-38:4|PE O-18:1_20:3	-0.01615965	0.0976082
PE O-38:4|PE O-16:0_22:4	-0.004731061	0.03570892
PE O-38:4|PE O-18:2_20:2	-0.056503605	2.30913657
PE O-38:4|PE O-18:1_20:3	0.043366365	0.80540741
PE O-38:3|PE O-18:2_20:1	-0.114700753	1.53670234
PE O-38:2|PE O-18:1_20:1	-0.122415641	1.53347139
PE O-38:2|PE O-18:1_20:1	0.014726898	0.07201204

PE O-39:8|PE O-17:2_22:6	-1.294664971	3.57490116
PE O-38:1|PE O-18:1_20:0	0.01178605	0.05341639
PE O-38:1|PE O-18:1_20:0	0.062103988	0.23673981
PE O-39:7|PE O-17:1_22:6	-0.093768156	1.33595045
PE O-38:0|PE O-18:0_20:0	-0.025197683	0.07972607
PE O-39:6|PE O-17:0_22:6	-0.019475732	0.5454634
PE O-39:3|PE O-18:2_21:1	-0.213209476	1.67424663
PE O-40:9|PE O-20:5_20:4	-0.303375132	1.66840836
PE O-40:9|PE O-18:3_22:6	-0.072950565	1.46633983
PE O-39:2|PE O-18:1_21:1	-0.116675404	0.46428689
PE O-40:8|PE O-18:2_22:6	-0.260915312	1.69423334
PE O-40:8|PE O-18:2_22:6	-0.210299227	1.87785336
PE O-40:7|PE O-18:1_22:6	-0.115332679	2.39016832
PE O-40:7|PE O-18:2_22:5	0.061252858	0.29225118
PE O-40:6|PE O-18:2_22:4	-0.192540832	4.89571978
PE O-40:6|PE O-18:0_22:6	-0.077066787	0.85940073
PE O-40:5|PE O-18:1_22:4	-0.02237957	0.16899206
PE O-40:4|PE O-18:1_22:3	-0.039430908	0.37277214
PE O-40:4|PE O-18:0_22:4	-0.032934929	0.24474704
PE O-40:3|PE O-20:2_20:1	-0.119430038	0.70370947
PE O-40:2|PE O-18:1_22:1	0.010653792	0.03274439
PE O-41:6|PE O-21:3_20:3	0.105464812	3.1070214
PE O-42:10|PE O-20:4_22:6	-0.273254674	2.64024213
PE O-41:3|PE O-18:2_23:1	-0.269003215	1.30592166
PE O-42:9|PE O-20:3_22:6	0.097807542	0.11987837
PE O-41:2|PE O-18:1_23:1	-0.114510977	0.32189966
PE O-42:8|PE O-18:2_24:6	-0.164491453	2.05138717
PE O-42:7|PE O-18:1_24:6	-0.045208525	0.68082987
PE O-42:7|PE O-18:1_24:6	-0.092152811	0.7553616
PE O-42:6|PE O-18:1_24:5	0.007914888	0.03255882
PE O-42:5|PE O-18:1_24:4	0.004784166	0.02760792
PE O-42:5|PE O-20:1_22:4	0.039362869	0.22818611
PE O-42:4|PE O-18:2_24:2	-0.086644661	0.49173846
PE O-42:3|PE O-22:2_20:1	-0.113955886	0.39034169
PE O-42:2|PE O-18:1_24:1	0.0691957	0.18542685
PG O-38:7|PG O-16:1_22:6	-0.237234065	0.74322629
PI O-36:4|PI O-16:0_20:4	0.127881477	1.19791273
PI O-38:6|PI O-16:0_22:6	0.068768099	0.82558866
PI O-38:5|PI O-18:1_20:4	0.129282361	3.18250682
PI O-38:4|PI O-18:0_20:4	0.274909935	3.64598963
PI O-40:7|PI O-18:1_22:6	0.056644603	0.59497262
PI O-40:6|PI O-18:0_22:6	0.201368181	1.85019425
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LPI 18:1	0.637712298	0.79385368
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LPI 22:6	0.316281249	0.17679927
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PE 24:1;O|PE 18:1_6:0;O	0.301325114	3.3285018
PE 34:2;O|PE 16:0_18:2;O	1.286211491	2.1017343
PE 34:1;O|PE 16:0_18:1;O	1.413952199	1.2732314
PE 36:5;O|PE 16:0_20:5;O	0.869612658	3.23607826
PE 36:5;O|PE 16:1_20:4;O	1.436715418	1.60516223
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PE 36:4;O|PE 16:0_20:4;O	0.856215778	1.93343638
PE 36:4;O|PE 16:0_20:4;O	0.804393562	1.40269745
PE 36:4;O|PE 16:0_20:4;O	0.858586054	1.31375874
PE 36:4;O|PE 16:0_20:4;O	0.804139336	1.91645302
PE 36:3;O|PE 18:1_18:2;O	1.398328776	2.24158833
PE 36:2;O|PE 18:1_18:1;O	0.356122358	1.41444985
PE 36:2;O|PE 18:1_18:1;O	0.53216553	2.45813352
PE 36:1;O|PE 18:0_18:1;O	0.070795432	0.1045348
PE 37:5;O|PE 22:5_15:0;O	0.479605789	2.80899692
PE 37:4;O|PE 17:0_20:4;O	0.693626166	2.10636826
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PE 36:4;O2|PE 16:0_20:4;O2	0.92016421	2.51075288
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PE 38:6;O|PE 16:0_22:6;O	0.686828506	1.29720873
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PE 38:5;O|PE 20:4_18:1;O	0.681711132	1.43980976
PE 38:5;O|PE 18:0_20:5;O	0.812131104	2.85965316
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PE 38:5;O|PE 18:1_20:4;O	0.55244316	1.89152035
PE 38:4;O|PE 18:0_20:4;O	0.753916793	1.58293567

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PE 38:4;O|PE 18:0_20:4;O	0.744714434	1.66150628
PE 38:4;O|PE 18:1_20:3;O	0.779511229	1.51750356
PE 36:5;O3|PE 16:0_20:5;O3	1.124157191	3.06299051
PE 37:4;O2|PE 17:0_20:4;O2	0.595899846	1.01581172
PE 36:4;O3|PE 16:0_20:4;O3	1.191260178	2.12909664
PE 36:4;O3|PE 16:0_20:4;O3	1.404196524	0.755909
PE 39:7;O|PE 22:6_17:1;O	0.340743229	2.83032392
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PE 38:5;O2|PE 20:5_18:0;O2	1.841350669	0.92263191
PE 38:5;O2|PE 18:1_20:4;O2	0.591561788	1.94302791
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PE 36:4;O4|PE 16:0_20:4;O4	2.50478832	2.09430302
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PE 40:6;O|PE 22:6_18:0;O	0.416924476	0.73797835
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PE 40:6;O|PE 18:0_22:6;O	0.57446837	1.21876826
PE 40:6;O|PE 22:6_18:0;O	0.313651779	2.71002053
PE 40:5;O|PE 18:1_22:4;O	0.218576993	0.17456597
PE 38:6;O3|PE 18:1_20:5;O3	0.941181885	1.87184707
PE 38:6;O3|PE 18:1_20:5;O3	1.085415567	2.48889572
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PE 38:5;O3|PE 18:0_20:5;O3	0.790530491	2.61959414
PE 38:5;O3|PE 18:1_20:4;O3	0.821184336	2.53187791
PE 38:4;O3|PE 18:0_20:4;O3	0.948799241	2.38635552
PE 38:4;O3|PE 18:0_20:4;O3	1.250728258	1.77200684
PE 38:4;O3|PE 18:0_20:4;O3	1.004875052	1.61443286
PE 38:4;O3|PE 18:1_20:3;O3	1.162688562	1.67425143
PE 38:3;O3|PE 18:0_20:3;O3	1.153188305	1.4587257
PE 40:7;O2|PE 18:1_22:6;O2	0.769322108	2.03967879
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PE 40:6;O2|PE 18:0_22:6;O2	0.880046995	1.36567101
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PE 40:5;O2|PE 18:0_22:5;O2	-0.038732664	0.44575978
PE 42:10;O|PE 20:4_22:6;O	-0.027665962	0.03558165
PE 38:4;O4|PE 18:0_20:4;O4	0.990147702	0.7253713
PE 42:8;O|PE 20:4_22:4;O	0.166739817	0.18315047
PE 42:8;O|PE 22:4_20:4;O	0.620833387	0.9787453

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PE 40:6;O3|PE 18:0_22:6;O3	1.032378096	1.27965859
PE 40:6;O3|PE 18:0_22:6;O3	0.692710946	1.48663783
PE 40:6;O3|PE 18:0_22:6;O3	0.886826091	1.3078618
PE 40:5;O3|PE 18:0_22:5;O3	0.91738852	2.10614953
PE 40:5;O3|PE 18:0_22:5;O3	0.877614857	2.8822766
PE 40:4;O4|PE 18:0_22:4;O4	0.890854083	1.64346052
PE 44:12;O|PE 22:6_22:6;O	0.202681896	0.63272176
PE 44:11;O|PE 22:6_22:5;O	0.467466229	0.33388205
PE 44:11;O|PE 22:6_22:5;O	0.245684346	0.45415301
PE 40:6;O4|PE 18:0_22:6;O4	1.718074091	1.96971234
PE 40:6;O4|PE 22:6_18:0;O4	1.191537029	1.82980811
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PE 40:6;O4|PE 22:6_18:0;O4	0.185223886	0.59097854
PE 44:10;O|PE 22:6_22:4;O	0.052374779	0.13140863
PE 44:10;O|PE 22:4_22:6;O	0.224810133	0.52158196
PE 44:10;O|PE 22:6_22:4;O	0.113841111	0.34423208
PE 44:10;O|PE 22:4_22:6;O	0.180120325	0.57431867
PE 44:10;O2|PE 22:6_22:4;O2	0.181078935	0.12358372
PE 44:10;O2|PE 22:4_22:6;O2	0.338898364	0.23706334
PE 44:10;O2|PE 22:4_22:6;O2	-2.389362441	0.44667303
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PI 36:5;O|PI 16:0_20:5;O	1.38751031	3.06043362
PI 36:4;O|PI 16:0_20:4;O	1.12111825	2.31887266
PI 36:4;O|PI 16:0_20:4;O	1.074425722	2.59119768
PI 36:4;O|PI 16:0_20:4;O	0.957599104	1.51684204
PI 36:4;O|PI 16:0_20:4;O	1.056704865	2.45437543
PI 36:4;O2|PI 16:0_20:4;O2	1.46587984	2.43840831
PI 38:6;O|PI 16:0_22:6;O	1.118144576	1.62876929
PI 38:5;O|PI 18:1_20:4;O	0.996891551	2.03362473
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PI 38:4;O|PI 18:0_20:4;O	0.997081769	1.39655961
PI 38:4;O|PI 18:0_20:4;O	0.975709244	2.99736244
PI 36:4;O3|PI 16:0_20:4;O3	1.606853012	2.15626238
PI 38:4;O2|PI 18:0_20:4;O2	1.006142888	2.4159299
PI 38:4;O2|PI 18:0_20:4;O2	1.013460095	3.08739918
PI 38:4;O2|PI 18:0_20:4;O2	0.902242081	2.18523397
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PI 38:5;O3|PI 18:0_20:5;O3	1.109164407	2.67062751
PI 38:4;O3|PI 18:0_20:4;O3	1.182489752	2.51543522
PI 38:4;O3|PI 18:0_20:4;O3	1.351394845	2.52087244
PI 38:4;O3|PI 18:0_20:4;O3	1.264570819	2.66322158
PI 38:4;O4|PI 18:0_20:4;O4	1.5640507	2.06403919
PE 32:2|PE 16:1_16:1	0.245864646	2.2267302
PE 34:3|PE 16:1_18:2	0.296536833	3.21091386
PE 34:2|PE 16:0_18:2	0.146774811	2.40349985
PE 34:2|PE 16:1_18:1	0.103609608	2.8871623

PE 34:1|PE 16:0_18:1	0.05135069	1.03336326
PE 34:0|PE 16:0_18:0	-0.117895115	0.77695901
PE 35:2|PE 17:1_18:1	0.00529872	0.08618895
PE 36:5|PE 16:0_20:5	0.334797214	2.64748056
PE 36:5|PE 16:1_20:4	0.11918298	1.41363422
PE 36:4|PE 16:0_20:4	0.090205013	1.76273393
PE 36:3|PE 16:0_20:3	0.10743919	1.83820654
PE 36:3|PE 18:1_18:2	0.024250717	0.45047939
PE 36:2|PE 18:1_18:1	-0.061325501	1.112498
PE 36:1|PE 18:0_18:1	-0.044341162	0.57917211
PE 36:0|PE 18:0_18:0	-0.028940138	0.13577405
PE 37:4|PE 17:0_20:4	0.119221837	2.1921024
PE 37:2|PE 18:1_19:1	-0.1406827	1.64419508
PE 38:7|PE 16:1_22:6	-0.214014645	1.26055358
PE 38:7|PE 16:1_22:6	-0.129135139	1.11934393
PE 38:7|PE 18:3_20:4	-0.220005834	2.4559734
PE 38:6|PE 16:0_22:6	0.008835554	0.0765469
PE 38:6|PE 18:2_20:4	-0.09505068	1.14269375
PE 38:5|PE 18:1_20:4	-0.091634999	1.40683942
PE 38:4|PE 18:0_20:4	0.068722593	0.75849611
PE 38:3|PE 18:0_20:3	0.034359562	0.42161427
PE 38:2|PE 18:1_20:1	-0.123792162	2.11705463
PE 38:1|PE 18:0_20:1	-0.033050389	0.37198477
PE 39:4|PE 19:0_20:4	0.316365457	2.51649819
PE 40:8|PE 18:2_22:6	-0.235205708	2.21613276
PE 40:7|PE 18:1_22:6	-0.154019142	1.30695505
PE 40:6|PE 18:0_22:6	-0.018461907	0.07235691
PE 40:5|PE 18:0_22:5	-0.210890992	0.84064373
PE 40:4|PE 18:0_22:4	0.012102773	0.09445941
PE 42:9|PE 20:3_22:6	-0.183137228	1.50795217
PE 42:8|PE 20:4_22:4	-0.150494364	0.93060967
PE 42:7|PE 20:1_22:6	-0.189825098	1.26906661
PE 42:5|PE 18:0_24:5	-0.076937834	0.90487275
PE 42:4|PE 18:0_24:4	-0.000107552	0.0008856
PE 42:1|PE 24:0_18:1	0.050903124	0.17176301
PE 44:12|PE 22:6_22:6	-0.315086902	1.72384243
PE 44:10|PE 22:4_22:6	-0.29921328	2.02537599
PE 46:12|PE 22:6_24:6	-0.333004319	1.89997045
PE 46:10|PE 24:4_22:6	-0.42840868	2.11393895
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PG 31:0|PG 15:0_16:0	0.185914253	1.4430297
PG 32:2|PG 16:1_16:1	1.213527404	4.76853538
PG 32:2|PG 16:1_16:1	1.188100221	0.77087715
PG 32:2|PG 16:1_16:1	0.503859846	0.98227157
PG 32:1|PG 16:0_16:1	0.100722435	2.55488575
PG 32:1|PG 14:0_18:1	1.192934045	3.39050566
PG 32:0|PG 16:0_16:0	1.098694059	5.88017342
PG 32:0|PG 16:0_16:0	0.082062154	1.41046881
PG 33:1|PG 15:0_18:1	-0.582768587	0.28876497
PG 33:0|PG 16:0_17:0	0.996276976	2.03407985
PG 34:4|PG 18:1_16:3	1.364984275	1.53286535
PG 34:3|PG 16:1_18:2	1.105735195	2.50960581

PG 34:3|PG 16:1_18:2	1.404659686	1.15763961
PG 34:2|PG 16:1_18:1	0.90131175	2.71081119
PG 34:2|PG 16:0_18:2	0.104373507	2.08132934
PG 34:2|PG 16:1_18:1	0.168967235	2.74565753
PG 34:1|PG 16:0_18:1	0.132687958	2.74507801
PG 34:1|PG 16:0_18:1	0.927625101	3.69239907
PG 34:1|PG 16:0_18:1	0.661236237	3.53492071
PG 36:5|PG 16:1_20:4	-0.035377957	0.24753517
PG 36:5|PG 16:0_20:5	-0.948257667	1.04082043
PG 36:5|PG 16:1_20:4	0.982385547	3.60860159
PG 36:4|PG 16:0_20:4	-0.03696425	0.54594588
PG 36:4|PG 16:0_20:4	0.886544407	2.8360499
PG 36:4|PG 18:2_18:2	0.998884467	2.63024316
PG 36:3|PG 16:0_20:3	0.839865991	2.92901588
PG 36:3|PG 18:1_18:2	0.0555726	0.15531231
PG 36:2|PG 18:1_18:1	0.1951255	1.32527981
PG 36:2|PG 18:1_18:1	0.822141768	3.0292567
PG 37:4|PG 17:0_20:4	-0.104936928	1.12785857
PG 38:9|PG 16:3_22:6	2.136621055	1.21032045
PG 37:2|PG 18:1_19:1	0.881640783	2.50012687
PG 38:7|PG 16:1_22:6	1.3636538	3.64675856
PG 38:6|PG 16:0_22:6	0.973717441	2.8046985
PG 38:6|PG 16:0_22:6	-0.037984338	0.43826765
PG 38:5|PG 18:1_20:4	-0.102229106	1.75700549
PG 38:5|PG 18:1_20:4	0.835536447	2.43021041
PG 38:5|PG 18:2_20:3	1.278642325	0.64312932
PG 38:4|PG 18:0_20:4	0.514950981	1.59251374
PG 38:4|PG 18:0_20:4	1.121194873	3.41114837
PG 38:4|PG 18:0_20:4	-0.026574664	0.3057715
PG 38:2|PG 18:1_20:1	0.768666299	3.15290731
PG 40:8|PG 20:4_20:4	0.990040923	3.80768655
PG 40:8|PG 18:2_22:6	0.766009587	0.72289053
PG 40:8|PG 18:2_22:6	0.108048917	1.16553191
PG 40:7|PG 20:3_20:4	0.912176951	2.55018906
PG 40:7|PG 18:1_22:6	0.95783669	2.61656089
PG 40:7|PG 18:1_22:6	-0.081079177	0.8901263
PG 40:6|PG 18:0_22:6	1.166621488	3.06240121
PG 40:6|PG 18:0_22:6	-0.022703625	0.40416072
PG 40:6|PG 18:1_22:5	1.348636533	3.48064911
PG 40:5|PG 18:1_22:4	0.948482583	2.87685183
PG 42:11|PG 20:5_22:6	1.270981397	2.22098207
PG 42:10|PG 20:4_22:6	0.883218469	4.39248937
PG 42:9|PG 20:4_22:5	0.756303666	2.89981365
PG 42:9|PG 20:3_22:6	1.038706661	3.05264519
PG 42:9|PG 20:4_22:5	1.003869664	2.83555137
PG 42:9|PG 20:3_22:6	0.152718598	0.81311411
PG 42:8|PG 20:4_22:4	0.669081086	2.35770037
PG 42:7|PG 20:1_22:6	1.24368522	2.11745274
PG 44:12|PG 22:6_22:6	0.660331625	3.67070323
PG 44:11|PG 22:5_22:6	0.979578632	2.34814263
PG 44:11|PG 22:5_22:6	1.441627409	2.10296543
PG 44:11|PG 22:5_22:6	1.269230904	5.57468651

PG 44:10|PG 22:4_22:6	0.983602196	1.70567598
PI 32:0|PI 16:0_16:0	-0.025220814	0.28854927
PI 34:4|PI 14:0_20:4	0.066518948	0.90122323
PI 34:2|PI 16:1_18:1	0.008594742	0.04681661
PI 34:1|PI 16:0_18:1	-0.087853724	0.15817335
PI 34:0|PI 16:0_18:0	-0.094931442	0.65248804
PI 35:4|PI 15:0_20:4	0.19361046	1.40352412
PI 36:5|PI 16:1_20:4	-0.13273235	1.76692243
PI 36:4|PI 16:0_20:4	0.070801933	1.97667165
PI 36:3|PI 16:0_20:3	0.15083886	1.6809764
PI 36:3|PI 16:0_20:3	0.123902883	0.96233182
PI 36:2|PI 18:1_18:1	0.088095201	0.17369326
PI 36:1|PI 18:0_18:1	-0.087604805	0.15437729
PI 36:1|PI 18:0_18:1	-0.041896157	0.36291619
PI 37:5|PI 17:1_20:4	-0.044226238	0.33837757
PI 37:4|PI 17:0_20:4	0.174993011	3.72094313
PI 38:6|PI 18:2_20:4	-0.083151643	0.88911807
PI 38:5|PI 18:1_20:4	-0.103507006	1.60831352
PI 38:4|PI 18:0_20:4	0.011204787	0.21429688
PI 38:3|PI 18:0_20:3	0.0467451	1.5539767
PI 39:6|PI 17:0_22:6	-0.013074442	0.09366926
PI 39:5|PI 19:1_20:4	-0.154172934	0.27812812
PI 39:4|PI 19:0_20:4	0.135163147	2.97940164
PI 40:8|PI 20:4_20:4	-0.757589227	1.06212984
PI 40:8|PI 20:4_20:4	-0.227723979	2.19282697
PI 40:7|PI 20:3_20:4	-0.038838752	0.43639667
PI 40:7|PI 18:1_22:6	-0.204357463	3.00542269
PI 40:6|PI 18:0_22:6	-0.140677274	1.84716097
PI 40:6|PI 20:2_20:4	-0.600852692	0.86733662
PI 40:5|PI 20:1_20:4	-0.088734523	2.00020848
PI 40:5|PI 18:0_22:5	-0.29197207	0.5530966
PI 40:4|PI 20:0_20:4	-0.092971861	1.74238638
PI 40:4|PI 18:0_22:4	0.04199338	0.52544458
PI 42:10|PI 20:4_22:6	-0.220862562	1.97706344
PI 42:9|PI 20:4_22:5	-0.547107863	0.90999554
PI 42:8|PI 20:4_22:4	-0.326507389	3.72302632
PI 44:12|PI 22:6_22:6	-0.373977903	2.05042943
PI 44:10|PI 22:4_22:6	-0.6831223	0.9657599

Data Description: Intensity of bis(monoacylglycerol)phosphate (BMP) isomers normalized to total lipid in PPT1 KO 7-month lipofuscin and total brain versus WT 24-month lipofuscin and total brain.

Fig. 4I - BMP Intensity/Total Moles Lipid	PPT1-7 Lipofuscin			WT-24 Lipofuscin			PPT1-7 Whole Brain			WT-24 Whole Brain		
BMP	4E+17	3.9273E+17	1.38E+17	1.26E+16	1.6343E+16	2.82E+16	1.15E+17	1.08E+17	8.06E+16	4.14E+15	1.75E+16	1.84E+16

Ordinary one-way ANOVA	
F	10.22
P value	0.0041
P value summary	**
Significant diff. among means (P < 0.05)?	Yes
R squared	0.7931

ANOVA table	SS	DF	MS	F (DFn, DF	P value
Treatment (between columns)	1.73E+35	3	5.78E+34	F (3, 8) = 10	P=0.0041
Residual (within columns)	4.52E+34	8	5.65E+33		
Total	2.19E+35	11			

Tukey's multiple comparisons test	Mean Diff.	95.00% CI of diff.	Below thres	Summary	Adjusted P Value
PPT1 KO-7 Lipofuscin vs. WT-24 Lipofuscin	2.91E+17	9.455e+016 to 4.877e+017	Yes	**	0.0064
PPT1 KO-7 Lipofuscin vs. PPT1 KO-7 Whole Brain	2.09E+17	1.257e+016 to 4.057e+017	Yes	*	0.0375
WT-24 Lipofuscin vs. WT-24 Whole Brain	5.71E+15	-1.909e+017 to 2.023e+017	No	ns	0.9997
PPT1 KO-7 Whole Brain vs. WT-24 Whole Brain	8.77E+16	-1.089e+017 to 2.843e+017	No	ns	0.5176

Data Description: Fig. 4J - Percent (%) contribution (>1%) of fatty acyl chain species to BMP isomer composition (positive mode) in PPT1 KO 7-month and WT 24-month lipofuscin and total brain (n = 3 biological replicates). Fig. S10E - Percent (%) contribution (>1%) of fatty acyl chain species to PG/BMP isomer composition (negative mode) in PPT1 KO 7-month and WT 24-month lipofuscin and total brain (n = 3 biological replicates).

	Fig. 4J - BMP Fatty Acyl Chain Composition											
	PPT1-7 Lipofuscin			WT-24 Lipofuscin			PPT1-7 Whole Brain			WT-24 Whole Brain		
16:0	2.030865	1.876404	1.803418	1.755449	1.675924	1.44997	1.592184	1.60833	1.622199	1.363857	1.828183	1.256878
16:1	4.704277	4.396185	3.976701	3.773789	3.268136	2.937543	4.177846	4.179614	4.059884	2.13575	2.920258	2.572547
18:1	30.73677	30.3557	31.97804	23.30971	21.59888	26.65588	41.50915	43.30701	40.67798	35.77277	33.21191	36.5436
18:2	1.92755	2.054788	1.585944	2.756785	2.444374	2.621568	2.072124	2.094879	1.879169	2.539607	2.289187	3.252146
20:2	0.244638	0.233913	0.192635	0.400848	0.373809	0.499347	0.523518	0.435613	0.468992	0.4264	0.452173	1.36372
20:3	0.653203	0.691663	0.594482	0.847296	0.644435	0.636798	0.505452	0.559181	0.555069	0.3174	0.354415	0.410539
20:4	12.34164	11.2321	10.94039	13.61919	12.61906	11.39366	9.852151	9.226039	9.819403	9.663578	9.874961	8.951486
22:4	1.909298	2.460239	1.921078	1.719851	1.615408	3.156979	1.553796	1.659928	1.343867	1.388334	1.014389	1.940395
22:6	45.05528	46.23657	46.44047	51.22934	55.06003	50.02269	37.73765	36.44493	38.87789	45.50522	47.39788	43.32638

	Fig. S10E - PG/BMP Fatty Acyl Chain Composition											
Fig. S10E	PPT1-7 Lipofuscin			WT-24 Lipofuscin			PPT1-7 Whole Brain			WT-24 Whole Brain		
16:0	21.38871	21.66362	25.75265	41.9823	41.51279	40.34369	22.46297	23.08342	25.86773	39.17592	38.42137	36.84551
16:1	2.103213	2.015318	1.560682	0.794741	0.78783	0.893821	1.637486	1.652964	1.489988	0.848743	0.891462	0.885345
18:0	2.234074	2.239032	2.794262	6.422591	5.809409	5.35748	1.939414	2.316237	2.545268	4.878406	4.726967	4.67017
18:1	35.67428	34.56827	33.50852	33.81815	34.32294	34.67775	36.98512	36.3588	35.0264	33.02825	33.46581	33.90684
18:2	1.737356	1.955801	1.167319	0.590403	0.542287	0.631296	1.183047	0.69287	1.0648	0.634438	0.630827	0.849054
20:1	0.583441	0.460183	0.886716	0.102175	0.06544	0.133068	1.332151	1.031608	1.156191	0.52978	0.477581	0.367152
20:3	1.324868	1.403353	0.94898	0.190882	0.172994	0.216103	1.042026	1.170375	0.881817	0.295187	0.305769	0.348545
20:4	11.80622	11.80471	12.09934	11.06714	10.48331	10.78998	10.95555	11.89601	11.71139	11.19939	10.80059	11.22043
22:6	21.13129	21.63719	19.37088	4.735037	5.974036	6.612977	20.39258	19.81099	18.4692	8.933723	9.611992	10.31267

Data Description: Fig. 5B - Quantification of immunoblots of PPT1 protein in total brain homogenates (A.U.), normalized to actin loading control (n = 5-6 biological replicates/genotype/timepoint). Fig. 5C - Bulk PPT1 enzyme activity (R.F.U.) in total brain fractions normalized to total protein (µg) determined by BCA (n = 4-5 biological replicates/genotype/age). Fig. 5D - Specific enzyme activity of PPT1 (R.F.U./A.U. PPT1 protein) in total brain homogenates (n = 4-5 biological replicates/genotype/age).

Fig. 5B - Whole Brain Total PPT1 Western Blot Quantification Normalized to Beta-Actin

PPT1-2	PPT1-4	PPT1-7	WT-2	WT-12	WT-18	WT-24
0	0	0	0.08	0.11	0.17	0.21
0	0	0	0.08	0.14	0.18	0.23
0	0	0	0.14	0.1	0.21	0.26
0	0	0	0.1	0.19	0.23	0.26
0	0	0	0.1	0.09	0.13	0.18
0		0	0.07	0.11	0.17	0.2

Two-way ANOVA	Ordinary
Alpha	0.05

Source of Variation	% of total variation	P value	P value summary	Significant?
Row Factor	2.526	0.0116	*	Yes
Column Factor	94.23	<0.0001	****	Yes

ANOVA table	SS (Type III)	DF	MS	F (DFn, DFd)	P value
Row Factor	0.008202	5	0.00164	F (5, 29) = 3.610	P=0.0116
Column Factor	0.306	6	0.051	F (6, 29) = 112.2	P<0.0001
Residual	0.01318	29	0.0004544		

Tukey's multiple comparisons test	Mean Diff.	95.00% CI of diff.	Below threshold?	Summary	Adjusted P Value
PPT1-2 vs. PPT1-4	0.006111	-0.03504 to 0.04726	No	ns	0.9991
PPT1-2 vs. PPT1-7	0	-0.03894 to 0.03894	No	ns	>0.9999
PPT1-2 vs. WT-2	-0.095	-0.1339 to -0.05606	Yes	****	<0.0001
PPT1-2 vs. WT-12	-0.1233	-0.1623 to -0.08439	Yes	****	<0.0001
PPT1-2 vs. WT-18	-0.1817	-0.2206 to -0.1427	Yes	****	<0.0001
PPT1-2 vs. WT-24	-0.2233	-0.2623 to -0.1844	Yes	****	<0.0001
PPT1-4 vs. PPT1-7	-0.006111	-0.04726 to 0.03504	No	ns	0.9991
PPT1-4 vs. WT-2	-0.1011	-0.1423 to -0.05996	Yes	****	<0.0001
PPT1-4 vs. WT-12	-0.1294	-0.1706 to -0.08829	Yes	****	<0.0001
PPT1-4 vs. WT-18	-0.1878	-0.2289 to -0.1466	Yes	****	<0.0001
PPT1-4 vs. WT-24	-0.2294	-0.2706 to -0.1883	Yes	****	<0.0001
PPT1-7 vs. WT-2	-0.095	-0.1339 to -0.05606	Yes	****	<0.0001
PPT1-7 vs. WT-12	-0.1233	-0.1623 to -0.08439	Yes	****	<0.0001
PPT1-7 vs. WT-18	-0.1817	-0.2206 to -0.1427	Yes	****	<0.0001
PPT1-7 vs. WT-24	-0.2233	-0.2623 to -0.1844	Yes	****	<0.0001
WT-2 vs. WT-12	-0.02833	-0.06727 to 0.01061	No	ns	0.2769
WT-2 vs. WT-18	-0.08667	-0.1256 to -0.04773	Yes	****	<0.0001
WT-2 vs. WT-24	-0.1283	-0.1673 to -0.08939	Yes	****	<0.0001
WT-12 vs. WT-18	-0.05833	-0.09727 to -0.01939	Yes	***	0.0009
WT-12 vs. WT-24	-0.1	-0.1389 to -0.06106	Yes	****	<0.0001
WT-18 vs. WT-24	-0.04167	-0.08061 to -0.002725	Yes	*	0.0299

Fig. 5C - Whole Brain PPT1 Activity

PPT1-2	PPT1-4	PPT1-7
137.0287	117.2889	220.1421
125.6778	123.1468	230.9136
134.1273	126.233	172.0615
127.032	143.9105	158.417
128.5414	134.202	153.4917
147.2555		194.5141

WT-2	WT-12	WT-18	WT-24
3249.882	3473.618	2828.273	2823.518
2692.406	3281.174	2786.227	2124.643
3063.951	3307.788	2656.588	2751.367
2902.794	3347.345	2505.556	3102.499
	3898.899	3319.237	3391.325
	3512.709	3436.812	2194.219

Ordinary One-Way ANOVA	
F	4.516
P value	0.0157
P value summary	*
Significant diff. among means (P < 0.05)?	Yes
R squared	0.4294

ANOVA table	SS	DF	MS	F (DFn, DFd)	P value
Treatment (between columns)	1779374	3	593125	F (3, 18) = 4.516	P=0.0157
Residual (within columns)	2364062	18	131337		
Total	4143436	21			

Tukey's multiple comparisons test	Mean Diff.	95.00% CI of diff	Below thresh	Summary	Adjusted P Value
WT-2 vs. WT-12	-493	-1154 to 168.2	No	ns	0.1884
WT-2 vs. WT-18	55.14	-606.0 to 716.3	No	ns	0.9952
WT-2 vs. WT-24	246	-415.2 to 907.2	No	ns	0.7221
WT-12 vs. WT-18	548.1	-43.22 to 1139	No	ns	0.0748
WT-12 vs. WT-24	739	147.6 to 1330	Yes	*	0.0116
WT-18 vs. WT-24	190.9	-400.5 to 782.2	No	ns	0.7987

Fig. 5D - Specific PPT1 Activity

PPT1-2	PPT1-4	PPT1-7
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0		0

WT-2	WT-12	WT-18	WT-24
39380.92	30658.45	17141.05	13745.18
34985.15	23488.18	15510.96	9227.67
22339.17	32802.23	12640.63	10634.39
27882.1	17913.52	10834.84	11753.09
	41920.49	25549.39	18588.43
	31597.57	20491.79	11222.34

Ordinary One-Way ANOVA	
F	11.63
P value	0.0002
P value summary	***
Significant diff. among means (P < 0.05)?	Yes
R squared	0.6597

ANOVA table	SS	DF	MS	F (DFn, DFd)	P value
Treatment (between columns)	1379134946	3	459711649	F (3, 18) = 11.63	P=0.0002
Residual (within columns)	711276146	18	39515341		
Total	2090411091	21			

Tukey's multiple comparisons test	Mean Diff.	95.00% CI of diff	Below thresh	Summary	Adjusted P Value
WT-2 vs. WT-12	1417	-10051 to 12885	No	ns	0.9849
WT-2 vs. WT-18	14119	2651 to 25587	Yes	*	0.013
WT-2 vs. WT-24	18618	7150 to 30086	Yes	**	0.0012
WT-12 vs. WT-18	12702	2445 to 22959	Yes	*	0.0124
WT-12 vs. WT-24	17202	6944 to 27459	Yes	***	0.0009
WT-18 vs. WT-24	4500	-5758 to 14757	No	ns	0.6108

Data Description: Fig. 5E. Holdout validation of WT 4-month and Ppt1 +/- 4-month total brain lipofuscin loads with simple linear regression model of WT aging as shown in Fig. 1C. simple linear regression fit is shown with WT 4-month data included (y = 0.009991*X – 0.01297; R2 = 0.9656).

Fig. 1C. Lipofuscin Load - Whole Brain				
WT-2	0.00640625	0.00382275	0.01112625	0.005255
WT-12	0.085304	0.10895625	0.10177125	0.1071335
WT-18	0.150266	0.12752375	0.16077917	0.19026025
WT-24	0.210339	0.26276925	0.23937075	0.23145125
WT-4	0.03761375	0.0347735	0.03225275	0.0312175
Ppt1 +/- 4M	0.0252945	0.03175425	0.032766	0.040071

Fig. 5E. Simple Linear Regression

Best-fit values	
	WT
Slope	0.009991
Y-intercept	-0.01297
X-intercept	1.298
1/slope	100.1

Std. Error	
	WT
Slope	0.0004447
Y-intercept	0.006488

95% Confidence Intervals	
	WT
Slope	0.009056 to 0.01093
Y-intercept	-0.02660 to 0.0006612
X-intercept	-0.07170 to 2.479

Goodness of Fit	
	WT
R squared	0.9656
Sy.x	0.0165

Equation	Y = 0.009991*X - 0.01297

Fig. 5E QUINT Custom Region Loads per Biological Replicate	WT-2				WT-12				WT-18				WT-24				WT-4				Ppt1 +/- 4 M			
Cortex	0.0003075	0.0007105	0.000767	0.00056	0.017036	0.02176925	0.01763275	0.0203635	0.0296035	0.0208005	0.0280065	0.02732025	0.03691575	0.04404275	0.03570975	0.03500825	0.00553275	0.007923	0.0054825	0.0078945	0.003761	0.005311	0.00633125	0.00878725
Fibretracts	0.0007465	0.00047425	0.00163775	0.00035575	0.0060155	0.00655425	0.006601	0.00680025	0.00844525	0.009021	0.01025025	0.0093655	0.01218675	0.013199	0.01362175	0.012667	0.0027015	0.00284475	0.00271875	0.00205375	0.0016775	0.0022825	0.00243875	0.0027945
Hippo	0.0004625	0.00023525	0.00071775	0.00033325	0.00619525	0.006398	0.00724325	0.00777725	0.01254925	0.00978075	0.01157175	0.01450925	0.016171	0.02040125	0.0162575	0.016532	0.00253775	0.0019285	0.0023765	0.0017975	0.00134275	0.00171125	0.0020915	0.0022975
Olfactory	0.00167725	0.000437	0.0015685	0.00025925	0.00591475	0.00779975	0.0073305	0.0061795	0.009976	0.00798075	0.0079725	0.01119575	0.0128855	0.0165935	0.01548025	0.01245425	0.0019405	0.002832	0.00234675	0.00253225	0.00297425	0.00280625	0.0028145	0.00397025
Hypothalamus	0.00053575	0.00029625	0.0005115	0.000288	0.0145215	0.02199175	0.02320725	0.02067975	0.02580575	0.02939475	0.03338725	0.038062	0.04445025	0.0501715	0.04870325	0.052841	0.00364175	0.004007	0.004383	0.0037915	0.0027195	0.0034165	0.0035575	0.004904
Striatum_Pallidum	0.0002025	0.00020375	0.0003925	0.00046875	0.00604075	0.009329	0.0091705	0.007454	0.016059	0.0123655	0.01801875	0.016473	0.02121275	0.0284895	0.02501775	0.0275785	0.00189925	0.00189475	0.0020385	0.0024035	0.0018895	0.0019015	0.00173375	0.002267
Mid_Hind_Medulla	0.0008145	0.00061975	0.0008995	0.00067175	0.01008975	0.01236175	0.01029425	0.01412	0.018769	0.0151105	0.019283	0.024354	0.0249805	0.031863	0.0306585	0.028101	0.00427775	0.00421575	0.00500475	0.00359125	0.0034575	0.0047485	0.00452025	0.0049175
Thalamus	0.00091775	0.00052375	0.00129075	0.0014445	0.00978175	0.0137725	0.0125635	0.01039725	0.01691725	0.0150315	0.02162	0.03155175	0.0271075	0.0341655	0.037966	0.03183025	0.00542925	0.0026605	0.004259	0.003758	0.00350675	0.00404325	0.0038625	0.00439525
Cerebellum	0.000633	0.00023525	0.00286	0.00032325	0.0076655	0.006796	0.005978	0.0114525	0.0081275	0.006355	0.00809967	0.0144495	0.01189075	0.01843975	0.01337225	0.0129885	0.00930375	0.00586225	0.00337375	0.00298275	0.003477	0.005057	0.00487675	0.00482225
VentricularSystem	0.000109	0.000087	0.000481	0.0005505	0.00204325	0.002184	0.00175025	0.0019095	0.0040135	0.0016835	0.0025695	0.00297925	0.00253825	0.0054035	0.00258375	0.0014505	0.0003495	0.000605	0.00026925	0.0004125	0.00048875	0.0004765	0.00053925	0.0009155

Fig 5E. QUINT Custom Region Load Average	WT-2	WT-12	WT-18	WT-24	WT-4	Ppt1 +/- 4M
CTX	0.00058625	0.01920038	0.02643269	0.03791913	0.00670819	0.006047625
OLF	0.00080356	0.00649275	0.0092705	0.01291863	0.00257969	0.002298313
HPF	0.00043719	0.00690344	0.01210275	0.01734044	0.00216006	0.00186075
STR/PAL	0.0009855	0.00680613	0.00928125	0.01435338	0.00241288	0.003141313
TH	0.00040788	0.02010006	0.03166244	0.0490415	0.00395581	0.003649375
HY	0.00031688	0.00799856	0.01572906	0.02557463	0.002059	0.001947938
MB/P/MY	0.00075138	0.01171644	0.01937913	0.02890075	0.00427238	0.004410938
CB	0.00104419	0.01162875	0.02128013	0.03276731	0.00402669	0.003951938
FT	0.00101288	0.007973	0.00925792	0.01417281	0.00538063	0.00455825
VS	0.00030688	0.00197175	0.00281144	0.002994	0.00040906	0.000605

Data Description: Fig. 5G - Quantification of immunoblots of PPT1 protein in 4-month-old total brain homogenates (A.U.), normalized to actin loading control (n = 3-5 biological replicates/genotype). Fig. 5H - Bulk PPT1 enzyme activity (R.F.U.) in 4-month-old total brain fractions from each genotype (*Ppt1* +/+, +/-, or -/-) normalized to total protein (µg) determined by BCA (n = 3-5 biological replicates/genotype). Fig. 5I - Specific enzyme activity of PPT1 in 4-month-old animals of each genotype (*Ppt1* +/+, +/-, or -/-) (R.F.U./A.U. PPT1 protein; (n = 3-5 biological replicates/genotype).

Fig. 5G - Total Brain PPT1 Protein

PPT1 KO 4 Mo (-/-)	PPT1 (+/-) 4 Mo	WT (+/+) 4 Mo
0.001167	0.012241	0.020236
0.002456	0.01702	0.023223
0.000209	0.013407	0.021933
	0.012572	0.023174
		0.02984

Ordinary one-way ANOVA	
F	60.59
P value	<0.0001
P value summary	****
Significant diff. among means (P < 0.05)?	Yes
R squared	0.9309

ANOVA table	SS	DF	MS	F (DFn, DFd)	P value
Treatment (between columns)	0.0009469	2	0.000473	F (2, 9) = 60.59	P<0.0001
Residual (within columns)	0.00007033	9	7.81E-06		
Total	0.001017	11			

Tukey's multiple comparisons test	Mean Diff.	95.00% CI of diff.	Below thres	Summary	Adjusted P Value
PPT1 KO 4 Mo vs. PPT1 +/- 4 Mo	-0.01253	-0.01849 to -0.006572	Yes	***	0.0006
PPT1 KO 4 Mo vs. WT 4 Mo	-0.0224	-0.02810 to -0.01670	Yes	****	<0.0001
PPT1 +/- 4 Mo vs. WT 4 Mo	-0.009871	-0.01511 to -0.004636	Yes	**	0.0013

Fig. 5H - Total Brain PPT1 Activity

PPT1 KO 4 Mo (-/-)	PPT1 (+/-) 4 Mo	WT (+/+) 4 Mo
26.39496	262.5219	395.1462
41.38633	356.1744	313.7596
45.86382	387.576	389.2465
9.808699	308.7735	368.8229
		409.8475

Ordinary one-way ANOVA	
F	95.78
P value	<0.0001
P value summary	****
Significant diff. among means (P < 0.05)?	Yes
R squared	0.9504

ANOVA table	SS	DF	MS	F (DFn, DFd)	P value
Treatment (between columns)	295150	2	147575	F (2, 10) = 95.7	P<0.0001
Residual (within columns)	15408	10	1541		
Total	310558	12			

Tukey's multiple comparisons test	Mean Diff.	95.00% CI of diff.	Below thres	Summary	Adjusted P Value
PPT1 KO 4 Mo vs. PPT1 +/- 4 Mo	-297.9	-374.0 to -221.8	Yes	****	<0.0001
PPT1 KO 4 Mo vs. WT 4 Mo	-344.5	-416.7 to -272.3	Yes	****	<0.0001
PPT1 +/- 4 Mo vs. WT 4 Mo	-46.6	-118.8 to 25.58	No	ns	0.2285

Fig. 5H - Total Brain PPT1 Specific Activity

PPT1 KO 4 Mo (-/-)	PPT1 (+/-) 4 Mo	WT (+/+) 4 Mo
0	21446.37	19526.57
0	20926.32	13510.52
0	28908.88	17747
	24559.92	15915.27
		13734.89

Ordinary one-way ANOVA	
F	67.07
P value	<0.0001
P value summary	****
Significant diff. among means (P < 0.05)?	Yes
R squared	0.9371

ANOVA table	SS	DF	MS	F (DFn, DFd)	P value
Treatment (between columns)	1000903473	2	5E+08	F (2, 9) = 67.07	P<0.0001
Residual (within columns)	67159270	9	7462141		
Total	1068062744	11			

Tukey's multiple comparisons test	Mean Diff.	95.00% CI of diff.	Below thres	Summary	Adjusted P Value
PPT1 KO 4 Mo vs. PPT1 +/- 4 Mo	-23960	-29786 to -18135	Yes	****	<0.0001
PPT1 KO 4 Mo vs. WT 4 Mo	-16087	-21657 to -10517	Yes	****	<0.0001
PPT1 +/- 4 Mo vs. WT 4 Mo	7874	2757 to 12990	Yes	**	0.0051