

Supplementary Table 9. Potential Causal Genes associated with Different Type of OA in Various Brain Cells by scRNA MR

Exposure	Outcome	scRNA	Beta	se	pval
SUPT3H	HipOA	Dopaminergic neuron	0.147522	0.016032	3.53E-20
UQCC1	KneeOA	Serotonergic-like neuron	0.22675	0.02521	2.34E-19
FLOT1	KneeOA	Inhibitory neurons	0.134608	0.019759	9.59E-12
TGFA	HipOA	OPC/COP	-0.11055	0.016491	2.04E-11
LRR37A	HipOA	Inhibitory neurons	0.046415	0.006945	2.34E-11
LRR37A	HipOA	OPC/COP	0.043918	0.006757	8.04E-11
ARL17B	HipOA	OPC/COP	0.030712	0.004783	1.35E-10
LRR37A	HipOA	Microglia	0.047474	0.007401	1.41E-10
LRR37A	HipOA	Astrocytes	0.036974	0.005766	1.43E-10
ARL17B	HipOA	Astrocytes	0.035797	0.005628	2.01E-10
TGFA	HandOA	OPC/COP	-0.14024	0.022283	3.10E-10
TGFA	ThumbOA	OPC/COP	-0.19121	0.030599	4.13E-10
KANSL1	HipOA	Astrocytes	0.033256	0.005453	1.07E-09
ARL17B	HipOA	Oligodendrocytes	0.029572	0.004854	1.11E-09
ARL17B	HipOA	Excitatory neurons	0.027262	0.004505	1.43E-09
KANSL1	HipOA	Inhibitory neurons	0.033554	0.005546	1.44E-09
KANSL1	HipOA	Endothelial cells	0.042224	0.006987	1.51E-09
KANSL1	HipOA	Excitatory neurons	0.036093	0.005975	1.53E-09
KANSL1	HipOA	Oligodendrocytes	0.035132	0.005819	1.57E-09
ICAIL	KneeOA	Excitatory neurons	0.095967	0.015958	1.81E-09
LRR37A	HipOA	Astrocytes	0.055915	0.009301	1.83E-09
MAPT	HipOA	Astrocytes	0.082167	0.013698	1.99E-09
KANSL1	HipOA	Microglia	0.040661	0.006805	2.30E-09
GNL3	HipOA	Dopaminergic neuron	-0.14389	0.024275	3.08E-09
KANSL1	HipOA	Dopaminergic neuron	0.095604	0.016142	3.16E-09
ARL17B	HipOA	Inhibitory neurons	0.029616	0.005007	3.31E-09
ARL17B	HipOA	Microglia	0.029954	0.005065	3.35E-09
GCAT	HipOA	Serotonergic-like neuron	0.146491	0.024829	3.64E-09
GCAT	HipOA	Dopaminergic neuron	0.112459	0.019061	3.64E-09

HLA-DQB1	HandOA	Microglia	0.12861	0.030005	1.82E-05
COG5	KneeOA	Serotonergic-like neuron	-0.0584	0.0138	2.29E-05
HLA-F	KneeOA	Excitatory neurons	-0.08526	0.020135	2.29E-05
FUT2	HipOA	Excitatory neurons	0.102709	0.024356	2.48E-05
BCAP29	ThumbOA	Serotonergic-like neuron	-0.10985	0.026204	2.76E-05
ZSCAN23	KneeOA	Excitatory neurons	0.101898	0.024366	2.89E-05
PLK5	FingerOA	Excitatory neurons	-0.24726	0.0592	2.96E-05
ANAPC4	HipOA	Excitatory neurons	0.153696	0.037027	3.31E-05
ER11	HipOA	Oligodendrocytes	0.084431	0.020519	3.88E-05
LY6D	KneeOA	Excitatory neurons	0.088173	0.021438	3.91E-05
FM04	HandOA	Endothelial cells	0.093574	0.022777	3.98E-05
MTCH2	HipOA	Dopaminergic neuron	-0.0722	0.01769	4.47E-05
MMP24	KneeOA	Oligodendrocytes	0.120549	0.029548	4.51E-05
CCDC146	KneeOA	Oligodendrocytes	0.056877	0.013954	4.58E-05
RAD51C	HandOA	Excitatory neurons	0.08361	0.020598	4.93E-05
AP006621	KneeOA	Astrocytes	0.067028	0.016518	4.95E-05
AC011462	SpineOA	Astrocytes	0.111046	0.027472	5.30E-05
HLA-A	HipOA	Microglia	-0.11463	0.028372	5.34E-05
FXYD4	ThumbOA	Serotonergic-like neuron	-0.09684	0.024051	5.66E-05
ANKRD7	HandOA	Oligodendrocytes	0.077559	0.019281	5.76E-05
ASB16-A	KneeOA	Serotonergic-like neuron	-0.0739	0.01844	6.08E-05
RAD51C	HandOA	Inhibitory neurons	0.082412	0.020588	6.21E-05
ZBED4	HipOA	Excitatory neurons	0.128283	0.032037	6.22E-05
HMG1	KneeOA	Dopaminergic neuron	0.05218	0.01307	6.56E-05
GATD1	KneeOA	Dopaminergic neuron	-0.0581	0.01458	6.72E-05
CD151	KneeOA	Serotonergic-like neuron	0.08817	0.02212	6.73E-05
FLOT1	KneeOA	Excitatory neurons	0.266275	0.06697	7.01E-05
ANO7	HipOA	Excitatory neurons	-0.06537	0.016478	7.27E-05
LINC0148	KneeOA	Excitatory neurons	0.103403	0.026073	7.31E-05
UROS	KneeOA	Excitatory neurons	0.109391	0.027668	7.69E-05
COG5	ThumbOA	Serotonergic-like neuron	-0.11888	0.030094	7.81E-05
NAALAD	HipOA	Oligodendrocytes	-0.06974	0.017684	8.01E-05

MPHOSP	KneeOA	Serotonergic-like neuron	-0.1124	0.01913	4.18E-09
KANSL1	HipOA	Pericyte	0.034558	0.005885	4.31E-09
CRHR1	HipOA	Dopaminergic neuron	0.176762	0.030213	4.90E-09
KANSL1	HipOA	OPC/COP	0.030835	0.005351	8.26E-09
MICU1	KneeOA	Inhibitory neurons	0.085952	0.014962	9.20E-09
ARL17B	HipOA	Endothelial cells	0.03201	0.005574	9.30E-09
WWP2	KneeOA	Oligodendrocytes	0.135899	0.023945	1.38E-08
KANSL1	-HipOA	Serotonergic-like neuron	0.035566	0.006342	2.04E-08
AC127024	KneeOA	Inhibitory neurons	0.140234	0.026567	1.30E-07
ZSCAN31	KneeOA	Oligodendrocytes	0.041116	0.007877	1.79E-07
MAPK3	KneeOA	Serotonergic-like neuron	-0.1745	0.03393	2.69E-07
LINC0221	HipOA	OPC/COP	0.042561	0.008473	5.09E-07
LINC0221	HipOA	Oligodendrocytes	0.04227	0.008426	5.27E-07
ASPHD1	KneeOA	Oligodendrocytes	0.126224	0.025256	5.80E-07
KCTD13	KneeOA	Oligodendrocytes	0.094169	0.018842	5.80E-07
MPHOSP	KneeOA	Dopaminergic neuron	-0.0911	0.01826	6.10E-07
FBN2	HipOA	OPC/COP	-0.07132	0.014477	8.37E-07
CHST3	HipOA	Astrocytes	-0.15749	0.032341	1.12E-06
TMEM50E	HipOA	Oligodendrocytes	0.089597	0.018427	1.16E-06
KANSL1	-HipOA	Dopaminergic neuron	0.030982	0.006375	1.17E-06
LINC0221	HipOA	Inhibitory neurons	0.083529	0.01719	1.18E-06
COLGAL1	HipOA	Astrocytes	0.065575	0.013514	1.22E-06
TMEM50E	HipOA	Astrocytes	0.116532	0.024031	1.24E-06
EXOSC6	KneeOA	Inhibitory neurons	-0.14162	0.029532	1.62E-06
TMEM50E	HipOA	Serotonergic-like neuron	0.085923	0.018022	1.86E-06
AC005670	HipOA	Oligodendrocytes	0.079817	0.016753	1.90E-06
LRR37A	HipOA	Dopaminergic neuron	0.081921	0.017252	2.05E-06
EXOSC6	KneeOA	Oligodendrocytes	-0.05624	0.011887	2.23E-06
TMEM50E	HipOA	Inhibitory neurons	0.117827	0.024908	2.24E-06
TMEM50E	HipOA	Excitatory neurons	0.114748	0.024257	2.24E-06
FBN2	HipOA	Microglia	-0.05703	0.01207	2.30E-06
AC127024	KneeOA	OPC/COP	-0.08339	0.017663	2.35E-06

SLC35G2	KneeOA	Astrocytes	0.072764	0.018513	8.48E-05
LIN28B	HandOA	Excitatory neurons	-0.10593	0.026977	8.61E-05
ZNF273	FingerOA	Astrocytes	-0.12887	0.032898	8.96E-05
LTBP3	HipOA	Oligodendrocytes	-0.07406	0.018924	9.09E-05
CPNE1	KneeOA	Dopaminergic neuron	0.0676	0.01732	9.52E-05
AC011462	SpineOA	Excitatory neurons	0.098803	0.025425	0.000102
PPP1R3B	HipOA	Oligodendrocytes	0.06169	0.015892	0.000104
CD46	FingerOA	OPC/COP	-0.15265	0.039459	0.00011
PLEC	HipOA	Inhibitory neurons	-0.12202	0.031546	0.00011
CD46	FingerOA	Oligodendrocytes	-0.14111	0.036488	0.00011
KNOP1	ThumbOA	Dopaminergic neuron	-0.23643	0.061186	0.000111
BCAP29	KneeOA	Serotonergic-like neuron	-0.0446	0.01155	0.00011
AP006621	KneeOA	Excitatory neurons	0.04327	0.011232	0.000117
MMP24O5	KneeOA	Oligodendrocytes	0.050782	0.01322	0.000122
MMP24O5	KneeOA	OPC/COP	0.065571	0.01707	0.000122
MMP24O5	KneeOA	Dopaminergic neuron	0.03974	0.01035	0.00012
BCAP29	FingerOA	Serotonergic-like neuron	-0.10575	0.027572	0.000125
AL450423	SpineOA	Excitatory neurons	-0.05868	0.015361	0.000133
CUTA	KneeOA	Serotonergic-like neuron	-0.0745	0.01951	0.00014
NOX4	HipOA	Oligodendrocytes	-0.05034	0.013202	0.000137
NMRAL1	KneeOA	Serotonergic-like neuron	-0.1066	0.02797	0.00014
HLA-DM	KneeOA	Oligodendrocytes	0.036988	0.00974	0.000146
HLA-DRB	HandOA	Dopaminergic neuron	-0.03327	0.00877	0.000148
COG5	FingerOA	Serotonergic-like neuron	-0.11981	0.031615	0.000151
IPP	KneeOA	Serotonergic-like neuron	0.07126	0.01883	0.00015
IGF1R	KneeOA	Endothelial cells	0.053091	0.014079	0.000163
MAPK3	HipOA	Serotonergic-like neuron	-0.1602	0.042515	0.000165
MINDY2	FingerOA	Oligodendrocytes	-0.17393	0.046268	0.00017
MYO15A	SpineOA	Inhibitory neurons	0.100213	0.02671	0.000176
LRR37A	HipOA	Oligodendrocytes	0.03073	0.008198	0.000178
MORC3	KneeOA	Excitatory neurons	-0.06795	0.018135	0.000179
CR1	FingerOA	Oligodendrocytes	0.08863	0.023841	0.000201

REEP3	HipOA	Serotonergic-like neuron	-0.07884	0.016984	3.45E-06
LRR37A	HipOA	Endothelial cells	0.044491	0.009606	3.63E-06
AC005670	HipOA	Astrocytes	0.0437	0.00945	3.76E-06
AP006621	KneeOA	Oligodendrocytes	0.074728	0.016161	3.76E-06
NTSDC2	HipOA	Serotonergic-like neuron	-0.11477	0.024852	3.87E-06
AP1G1	KneeOA	Oligodendrocytes	-0.06806	0.014761	4.01E-06
PHLPP2	KneeOA	Oligodendrocytes	-0.05951	0.01291	4.03E-06
TSEN15	HipOA	Serotonergic-like neuron	-0.11913	0.025869	4.12E-06
HLA-DRB	FingerOA	Dopaminergic neuron	-0.0526	0.011538	5.13E-06
EXOSC6	KneeOA	Excitatory neurons	-0.12688	0.02784	5.18E-06
LRR37A	HipOA	Excitatory neurons	0.034759	0.007629	5.21E-06
CLEC18A	KneeOA	OPC/COP	-0.05444	0.01205	6.24E-06
HMG1	HipOA	Dopaminergic neuron	0.074596	0.016578	6.81E-06
LYNX1	KneeOA	Serotonergic-like neuron	-0.0652	0.01452	7.09E-06
LINC0221	HipOA	Astrocytes	0.034941	0.007788	7.24E-06
AC127024	KneeOA	Excitatory neurons	-0.08747	0.019586	7.98E-06
HLA-DRB	HandOA	Serotonergic-like neuron	-0.04623	0.010379	8.41E-06
AC024257	KneeOA	Microglia	-0.08907	0.019997	8.41E-06
LINC0221	HipOA	Excitatory neurons	0.068305	0.015364	8.76E-06
MARVEL1	KneeOA	Excitatory neurons	-0.13019	0.029289	8.79E-06
AC005670	HipOA	Excitatory neurons	0.075789	0.017108	9.42E-06
HLA-DRB	FingerOA	Serotonergic-like neuron	-0.05544	0.012578	1.05E-05
NTSDC2	HipOA	Dopaminergic neuron	-0.10449	0.023779	1.11E-05
ZFP57	KneeOA	Microglia	0.073114	0.016722	1.23E-05
ZSCAN23	KneeOA	Oligodendrocytes	0.077934	0.01785	1.26E-05
HLA-DQB1	FingerOA	Microglia	0.156281	0.035894	1.34E-05
TGFA	KneeOA	OPC/COP	-0.0561	0.012919	1.41E-05
CPNE1	KneeOA	Serotonergic-like neuron	0.0285	0.00657	1.46E-05
MYO5A	KneeOA	OPC/COP	0.111721	0.025794	1.48E-05
PSMC3	HipOA	Dopaminergic neuron	-0.10676	0.037304	1.64E-05
ERGIC3	KneeOA	Oligodendrocytes	-0.0547	0.012737	1.75E-05
ERGIC3	KneeOA	Astrocytes	-0.06578	0.015318	1.75E-05

ANKRD6	FingerOA	Oligodendrocytes	-0.26423	0.071211	0.000207
LINC0109	KneeOA	Oligodendrocytes	-0.04355	0.011754	0.000211
PTER	SpineOA	Astrocytes	0.068299	0.018446	0.000213
UBE2Q2P	HipOA	Dopaminergic neurons	-0.08234	0.022258	0.000216
ELI24	ThumbOA	Serotonergic-like neurons	0.166241	0.045019	0.000222
MMP24O5	KneeOA	Serotonergic-like neurons	0.060004	0.01631	0.000223
NAALAD	SpineOA	Oligodendrocytes	-0.07297	0.019836	0.000234
SPECC1	KneeOA	Oligodendrocytes	0.087679	0.023833	0.000234
AL450423	HandOA	Excitatory neurons	-0.06823	0.018548	0.000235
AC011462	SpineOA	Inhibitory neurons	0.080376	0.021883	0.00024
PSRC1	HipOA	Excitatory neurons	0.137518	0.037504	0.000246
ECM2	FingerOA	Inhibitory neurons	0.188725	0.051518	0.000249
GET1	HipOA	Serotonergic-like neurons	0.064	0.017488	0.000253
GET1	HipOA	Dopaminergic neurons	0.057585	0.015735	0.000253
ERI1	HipOA	Astrocytes	0.087607	0.023957	0.000255
LCA5L	HipOA	Oligodendrocytes	-0.10992	0.030062	0.000256
LCA5L	HipOA	Excitatory neurons	-0.10775	0.029471	0.000256
AKAP7	FingerOA	Dopaminergic neurons	-0.10715	0.029367	0.000263
AL450423	ThumbOA	Excitatory neurons	-0.09209	0.025265	0.000267
DMXL2	KneeOA	Microglia	0.079477	0.021868	0.000279
ZSCAN31	KneeOA	Excitatory neurons	0.084438	0.02332	0.000294
NOX4	SpineOA	Oligodendrocytes	-0.05425	0.015005	0.0003
COLGAL1	KneeOA	Astrocytes	0.038025	0.010524	0.000302
MAN2C1	HandOA	Microglia	-0.09997	0.027689	0.000306
NAV3	HipOA	Astrocytes	-0.08578	0.023789	0.000311
XKR6	HipOA	Inhibitory neurons	0.166304	0.046162	0.000315
CADM2	HipOA	Oligodendrocytes	0.053267	0.01479	0.000316
AC024257	HipOA	Microglia	-0.09224	0.025619	0.000318
XKR6	HipOA	Excitatory neurons	0.139689	0.038826	0.000321
PSMC3	KneeOA	Dopaminergic neurons	-0.1071	0.02976	0.00032
LIN28B	SpineOA	Excitatory neurons	-0.08003	0.022265	0.000325
ST8SIA1	HandOA	Astrocytes	-0.09927	0.02768	0.000336

TGFA	FingerOA	OPC/COP	-0.11531	0.032218	0.000345	NPIP13	KneeOA	Astrocytes	0.065734	0.018803	0.000472	SPATA33	ThumbOA	Serotonergic-like neu	0.164701	0.048809	0.00074
TMEM255	HandOA	Serotonergic-like neu	-0.06887	0.019259	0.000349	NPIP13	KneeOA	Inhibitory neurons	0.08865	0.025358	0.000472	TRAF1	KneeOA	Oligodendrocytes	0.053356	0.015819	0.000744
SLC2A1-I	KneeOA	Serotonergic-like neu	0.03093	0.00866	0.00035	NPIP13	KneeOA	Microglia	0.053209	0.01522	0.000472	BCAP29	HandOA	Serotonergic-like neu	-0.06552	0.019429	0.000746
SLC2A1-I	KneeOA	Dopaminergic neu	0.06192	0.01733	0.00035	NPIP13	KneeOA	Oligodendrocytes	0.042491	0.012154	0.000472	NBPF26	HipOA	OPC/COP	-0.0577	0.017119	0.000751
LCA5L	HipOA	Inhibitory neurons	-0.09065	0.025389	0.000356	NPIP13	KneeOA	Excitatory neurons	0.099245	0.028388	0.000472	CD151	ThumbOA	Astrocytes	0.144888	0.043208	0.000799
HLA-DM/	ThumbOA	OPC/COP	0.068584	0.019232	0.000362	POLR2L	ThumbOA	Dopaminergic neu	-0.1655	0.047435	0.000485	MTFR1	HipOA	Oligodendrocytes	-0.08055	0.024029	0.000801
VIPR2	FingerOA	Excitatory neurons	0.20604	0.057919	0.000375	CR1	HandOA	Oligodendrocytes	0.057312	0.016431	0.000487	LRRC37A	HipOA	Oligodendrocytes	0.071633	0.021384	0.000809
BHMT	SpineOA	Astrocytes	-0.1026	0.028852	0.000377	HLA-DM/	KneeOA	Astrocytes	0.038457	0.011052	0.000502	LINS1	ThumbOA	Astrocytes	0.083664	0.024976	0.000809
HLA-DM/	KneeOA	Microglia	0.040476	0.011389	0.000379	PID1	HipOA	Serotonergic-like neu	-0.06405	0.01841	0.000504	AC027020	ThumbOA	Excitatory neurons	0.089229	0.026638	0.000809
DMGDH	SpineOA	Astrocytes	-0.13185	0.037099	0.00038	CYB561	ThumbOA	Excitatory neurons	-0.03872	0.011142	0.000511	CERS3	ThumbOA	Excitatory neurons	0.113014	0.033739	0.000809
RNASEH2	HipOA	Excitatory neurons	0.150145	0.042256	0.000381	ZSCAN23	KneeOA	Endothelial cells	0.047523	0.013696	0.000521	LINS1	ThumbOA	OPC/COP	0.092894	0.027732	0.000809
HLA-DM/	ThumbOA	Oligodendrocytes	0.058105	0.016361	0.000383	TRAPPC2/	FingerOA	Serotonergic-like neu	0.09595	0.027656	0.000522	AKAP7	HandOA	Dopaminergic neu	-0.06816	0.020373	0.000821
PPHLN1	HipOA	Microglia	0.067638	0.019057	0.000386	TRAPPC2/	FingerOA	Dopaminergic neu	0.107929	0.031109	0.000522	KNOP1	HandOA	Dopaminergic neu	-0.17952	0.053675	0.000824
CLBA1	SpineOA	Excitatory neurons	-0.07171	0.020225	0.000392	PPIL6	HipOA	Excitatory neurons	0.141024	0.040664	0.000524	CDK10	ThumbOA	Astrocytes	0.188499	0.05651	0.000851
EXOSC6	SpineOA	Inhibitory neurons	-0.14724	0.04154	0.000393	SAAL1	HipOA	Astrocytes	0.059067	0.017068	0.000539	TBCK	HipOA	Dopaminergic neu	-0.08098	0.024287	0.000855
C10orf95	HandOA	Dopaminergic neu	0.107295	0.030317	0.000402	AC021752	KneeOA	Excitatory neurons	0.061841	0.017874	0.00054	SUPT3H	KneeOA	Dopaminergic neu	0.0435	0.01305	0.00086
BCCIP	KneeOA	Excitatory neurons	0.080127	0.022641	0.000402	AC021752	KneeOA	Inhibitory neurons	0.065109	0.018818	0.00054	MYO6	HipOA	Astrocytes	-0.07462	0.022388	0.000859
HLA-DM/	ThumbOA	Microglia	0.063828	0.018052	0.000407	PPP3R1	HipOA	Dopaminergic neu	-0.08783	0.025394	0.000543	GP2	HandOA	Serotonergic-like neu	0.133151	0.039958	0.000861
MAPT-AS	HipOA	Dopaminergic neu	-0.06963	0.019716	0.000413	TRAF3	KneeOA	Excitatory neurons	0.086796	0.025111	0.000547	C10orf95	ThumbOA	Dopaminergic neu	0.131417	0.039443	0.000863
ST8SIA1	FingerOA	Astrocytes	-0.14601	0.041372	0.000417	STOML1	ThumbOA	Dopaminergic neu	-0.2364	0.068547	0.000563	CDC14A	HipOA	Microglia	-0.08765	0.026336	0.000875
AL596442	FingerOA	Endothelial cells	-0.09777	0.027708	0.000418	GOLGA6L	HipOA	Astrocytes	0.047626	0.013833	0.000575	BEST1	ThumbOA	Astrocytes	-0.13606	0.040929	0.000886
TBCK	HipOA	Serotonergic-like neu	-0.08735	0.024796	0.000427	NAALAD/	KneeOA	Oligodendrocytes	-0.0477	0.013879	0.000588	ATG7	KneeOA	Excitatory neurons	0.115914	0.034906	0.000898
PLOD1	KneeOA	Oligodendrocytes	0.068897	0.01956	0.000428	HMGN1	HandOA	Dopaminergic neu	0.076985	0.022402	0.000589	LINC0106/	FingerOA	Serotonergic-like neu	-0.06162	0.018571	0.000906
HLA-DM/	ThumbOA	Astrocytes	0.060447	0.017169	0.00043	HMGN1	FingerOA	Dopaminergic neu	0.111343	0.0324	0.000589	LINC0106/	FingerOA	Pericyte	-0.10308	0.031135	0.00093
LYNX1	HipOA	Serotonergic-like neu	-0.06174	0.017568	0.000441	KRI1	HandOA	Excitatory neurons	0.14625	0.042626	0.000601	LINC0106/	FingerOA	Endothelial cells	-0.08148	0.02461	0.00093
RNASEH2	HipOA	Serotonergic-like neu	0.07369	0.02098	0.000444	CHST3	KneeOA	Astrocytes	0.086411	0.025211	0.000609	LINC0106/	FingerOA	Excitatory neurons	-0.07028	0.021228	0.00093
SUPT3H	HandOA	Oligodendrocytes	0.112602	0.032075	0.000447	CXCL11	FingerOA	Dopaminergic neu	-0.09819	0.028664	0.000613	LINC0106/	FingerOA	Inhibitory neurons	-0.06006	0.018141	0.00093
SYCE3	HandOA	Serotonergic-like neu	-0.05806	0.016551	0.000452	FAM66A	HipOA	Excitatory neurons	0.047879	0.014044	0.000651	LINC0106/	FingerOA	Oligodendrocytes	-0.06691	0.020209	0.00093
CHKB-DT	HandOA	Serotonergic-like neu	-0.14336	0.040866	0.000452	ICA1L	HandOA	Excitatory neurons	0.092719	0.027291	0.00068	NOX4	KneeOA	Oligodendrocytes	-0.03414	0.010313	0.000931
SPECC1	SpineOA	Dopaminergic neu	0.104111	0.029688	0.000454	LINC0148	HipOA	Excitatory neurons	0.113202	0.033434	0.00071	COL5A2	HipOA	Excitatory neurons	0.125014	0.037825	0.00095
C10orf95	FingerOA	Dopaminergic neu	0.144574	0.041236	0.000455	RNASEH2	HipOA	Dopaminergic neu	0.078143	0.023123	0.000726	MYO15A	HipOA	Inhibitory neurons	0.078701	0.023815	0.000951
NPIP13	KneeOA	OPC/COP	0.067454	0.019295	0.000472	LINC0153	SpineOA	Inhibitory neurons	0.054684	0.0162	0.000736	CENPP	FingerOA	Inhibitory neurons	0.064884	0.019655	0.000963
MIR181A	KneeOA	Dopaminergic neu	-0.0344	0.01043	0.00096	PDE4D	HipOA	OPC/COP	-0.0821	0.025465	0.001264	PERP	FingerOA	Serotonergic-like neu	-0.11993	0.037997	0.001598
CRELD1	KneeOA	OPC/COP	0.072652	0.022024	0.000971	TRAPPC2/	HandOA	Serotonergic-like neu	0.061207	0.018985	0.001264	PERP	FingerOA	Dopaminergic neu	-0.18981	0.060136	0.001598
SAMD5	HandOA	Excitatory neurons	-0.15865	0.048127	0.000979	TRAPPC2/	HandOA	Dopaminergic neu	0.068848	0.021355	0.001264	NCL	KneeOA	Excitatory neurons	-0.09018	0.028581	0.001604
ZSCAN31	KneeOA	Inhibitory neurons	0.035924	0.010907	0.000989	POU5F1	FingerOA	Excitatory neurons	0.123387	0.038306	0.001277	SLC9A8	HipOA	Excitatory neurons	-0.09471	0.030024	0.001608
VWDE	FingerOA	Excitatory neurons	-0.07956	0.024193	0.001007	SF1	HipOA	Excitatory neurons	0.137335	0.04266	0.001285	HLA-DM/	ThumbOA	Excitatory neurons	0.058523	0.018559	0.001614
NMRAL1	KneeOA	Oligodendrocytes	-0.07494	0.022835	0.001031	INPP1	HipOA	Excitatory neurons	-0.06154	0.019118	0.001286	XRCC1	HandOA	Dopaminergic neu	-0.12005	0.038085	0.00162
HLA-F	HandOA	Excitatory neurons	-0.11603	0.035388	0.001043	DCBLD2	HipOA	Oligodendrocytes	-0.09164	0.028503	0.001304	GOLGA6L	HipOA	Excitatory neurons	0.033156	0.010518	0.00162
MAPK6	KneeOA	Oligodendrocytes	0.046807	0.01429	0.001055	WWP2	SpineOA	Oligodendrocytes	0.109165	0.033972	0.001312	GSDMD	FingerOA	Serotonergic-like neu	-0.09124	0.028954	0.001626
LRRC37A	HipOA	Serotonergic-like neu	0.061289	0.018722	0.001062	TMEM50E	SpineOA	Excitatory neurons	0.087402	0.027205	0.001315	ZNF587	ThumbOA	Dopaminergic neu	0.107982	0.034269	0.001627
GPRI46	KneeOA	OPC/COP	-0.05396	0.016485	0.001062	TMEM50E	SpineOA	Inhibitory neurons	0.089747	0.027935	0.001315	ZNF814	ThumbOA	Dopaminergic neu	0.168982	0.053628	0.001627
HMGCLL	HipOA	Excitatory neurons	0.167619	0.051212	0.001064	ADGRB3	SpineOA	Oligodendrocytes	0.051504	0.016051	0.001333	HMGN1	HipOA	Serotonergic-like neu	0.094522	0.030001	0.001629
GPHN	FingerOA	Oligodendrocytes	-0.15112	0.046206	0.001073	PID1	KneeOA	Serotonergic-like neu	-0.0465	0.01451	0.00134	PAM	KneeOA	Serotonergic-like neu	-0.0357	0.01134	0.00163
COG5	HandOA	Serotonergic-like neu	-0.07307	0.022354	0.00108	VAR52	KneeOA	Serotonergic-like neu	-0.0765	0.02386	0.00134	NBPF26	HipOA	Astrocytes	-0.05205	0.016547	0.001658
AC127024	HipOA	OPC/COP	-0.07209	0.022071	0.00109	EI24	HandOA	Serotonergic-like neu	0.104804	0.032736	0.001367	NBPF26	HipOA	Excitatory neurons	-0.06037	0.019192	0.001658
SPATA33	KneeOA	Serotonergic-like neu	0.06833	0.02093	0.0011	CD151	KneeOA	OPC/COP	0.041297	0.012904	0.001372	NBPF26	HipOA	Pericyte	-0.0523	0.016627	0.001658
DEC2R2	FingerOA	Dopaminergic neu	0.120175	0.036852	0.00111	SIRT6	FingerOA	Dopaminergic neu	0.185791	0.058097	0.001384	HLA-C	HipOA	Endothelial cells	0.137404	0.043901	0.001749
TRIM38	HipOA	Serotonergic-like neu	-0.06101	0.018729	0.001123	CCDC91	FingerOA	Dopaminergic neu	0.169148	0.052899	0.001386	ADAL	KneeOA	Excitatory neurons	-0.04164	0.013319	0.001771
IQCH-AS1	ThumbOA	Serotonergic-like neu	0.183157	0.056222	0.001123	POLR2L	KneeOA	Dopaminergic neu	-0.0641	0.02005	0.0014	STOML1	ThumbOA	Excitatory neurons	-0.23965	0.076777	0.0018
POLR2L	KneeOA	Serotonergic-like neu	-0.1015	0.03117	0.00114	SYCE3	HandOA	Dopaminergic neu	-0.15032	0.047161	0.001436	FAM182B	SpineOA	Inhibitory neurons	0.025268	0.080977	0.001804
SRP19	KneeOA	Dopaminergic neu	-0.0709	0.02178	0.00114	C10orf95	ThumbOA	Serotonergic-like neu	0.182878	0.057402	0.001443	SUPT3H	HipOA	Oligodendrocytes	0.074226	0.023792	0.00181
LKAAEA	KneeOA	Dopaminergic neu	-0.0377	0.01159	0.00114	C10orf95	FingerOA	Serotonergic-like neu	0.19153	0.060129	0.001446	UROS	KneeOA	Serotonergic-like neu	0.04694	0.01506	0.00182
INPP1	HipOA	Oligodendrocytes	-0.1057	0.032542	0.001162	SCARB1	HandOA	Oligodendrocytes	0.117296	0.036852	0.001458	UROS	KneeOA	Dopaminergic neu	0.05107	0.01638	0.00182
C10orf95	HandOA	Serotonergic-like neu	0.142888	0.044055	0.001181	SPATA33	HandOA	Serotonergic-like neu	0.113013	0.035515	0.001462	HLA-DRB	FingerOA	Endothelial cells	-0.06037	0.019367	0.001825
VAV3	ThumbOA	Excitatory neurons	-0.18415	0.056784	0.001183	MED24	SpineOA	Dopaminergic neu	0.074887	0.023557	0.001478	CCDC149	KneeOA	Oligodendrocytes	-0.04376	0.01407	0.001872
ASPHD1	HandOA	Oligodendrocytes	0.139083	0.042917	0.001192	PLCL1	KneeOA	Dopaminergic neu	-0.0645	0.0203	0.00148	ZCRB1	HipOA	Excitatory neurons	0.147155	0.04732	0.001872
KCTD13	HandOA	Oligodendrocytes	0.103762	0.032018	0.001192	ABHD12	SpineOA	Dopaminergic neu	-0.04151	0.01306	0.001483	SAR1A	ThumbOA	Dopaminergic neu	0.123295	0.039651	0.001874
SRGAP3	KneeOA	Oligodendrocytes	0.066314	0.020471	0.001198	RAPGEF3	HandOA	Oligodendrocytes	0.070534	0.022234	0.001512	MVB12B	SpineOA	Microglia	0.079924	0.02571	0.001879
SLC35E2	KneeOA	Dopaminergic neu	0.04436	0.0137	0.00121	BDNF-AS	FingerOA	Dopaminergic neu	-0.183	0.057702	0.001517	MAPRE3	KneeOA	Dopaminergic neu	0.128	0.04122	0.0019
MROH6	HandOA	Serotonergic-like neu	-0.12955	0.040107	0.001237	GALNT18	FingerOA	Excitatory neurons	0.208198	0.065652	0.001518	AL450423	FingerOA	Excitatory neurons	-0.08255	0.026589	0.001905
MTFR1	KneeOA	Oligodendrocytes	-0.06103	0.018894	0.001237	CDIP1	KneeOA	Astrocytes	-0.04309	0.013595	0.001528	AC092647	KneeOA	Excitatory neurons	0.067249	0.021685	0.001928
EXOSC6	SpineOA	Oligodendrocytes	-0.05381	0.016677	0.001252	RUNX2	HandOA	Oligodendrocytes	0.037207	0.011751	0.001544	TTL1	FingerOA	Dopaminergic neu	0.		

AC008014	ThumbOA	Inhibitory neurons	0.127412	0.041153	0.001961	MTHFSD	SpineOA	Excitatory neurons	0.089745	0.029411	0.002278	STYXL1	HipOA	Excitatory neurons	-0.08766	0.029018	0.00252
AC008014	ThumbOA	Microglia	0.080499	0.026	0.001961	CKAP2	ThumbOA	Inhibitory neurons	-0.09242	0.030293	0.002282	CDK10	ThumbOA	Inhibitory neurons	0.106464	0.035267	0.002538
AC008014	ThumbOA	OPC/COP	0.082366	0.026603	0.001961	CKAP2	ThumbOA	Excitatory neurons	-0.13015	0.042661	0.002282	PHYHD1	HandOA	Serotonergic-like neu	-0.06823	0.022603	0.002539
LINC0106	KneeOA	Oligodendrocytes	0.035958	0.011616	0.001965	CHAD	HipOA	Excitatory neurons	0.042595	0.013977	0.002308	STXBP4	SpineOA	Astrocytes	0.089993	0.029814	0.00254
NALCN	FingerOA	Astrocytes	0.175228	0.056638	0.001976	TDRD5	KneeOA	Inhibitory neurons	-0.03567	0.011712	0.002322	IPP	KneeOA	Excitatory neurons	0.067524	0.022383	0.002555
JAZF1	ThumbOA	Microglia	-0.074	0.023932	0.001988	TRAPPC3	KneeOA	Serotonergic-like n	0.03326	0.01093	0.00234	BTN3A2	KneeOA	Microglia	-0.04693	0.015561	0.002563
B3GNT8	SpineOA	Serotonergic-like neu	0.110404	0.035723	0.001998	TRAPPC3	KneeOA	Dopaminergic neur	0.03742	0.01229	0.00234	BTN3A2	KneeOA	Serotonergic-like n	-0.0519	0.01722	0.00256
TMEM91	SpineOA	Dopaminergic neur	-0.08019	0.025946	0.001998	PTTG1IP	ThumbOA	Dopaminergic neur	0.250128	0.082183	0.002338	NBPF26	HipOA	Oligodendrocytes	-0.0879	0.029157	0.002572
HLA-C	KneeOA	Endothelial cells	0.10887	0.035252	0.002013	PPP1R3B	SpineOA	Oligodendrocytes	0.042315	0.013905	0.002342	PRKD3	FingerOA	Oligodendrocytes	0.083431	0.02768	0.002577
SLC38A9	HipOA	Oligodendrocytes	0.036251	0.011744	0.002023	EFCAB6	HipOA	Excitatory neurons	0.123351	0.040568	0.002361	NSUN5	HipOA	Excitatory neurons	0.156796	0.052181	0.002657
FMO4	ThumbOA	Endothelial cells	0.0959	0.03109	0.002038	DECRC2	FingerOA	Serotonergic-like neu	0.113332	0.037299	0.002378	MROH6	FingerOA	Serotonergic-like neu	-0.17424	0.058145	0.00273
ADAMTS1	FingerOA	OPC/COP	-0.09483	0.030759	0.00205	RWDD2B	KneeOA	Excitatory neurons	-0.05433	0.01788	0.002379	CCDC88B	HandOA	Excitatory neurons	0.065511	0.021869	0.002739
TNS3	ThumbOA	Microglia	0.152578	0.049561	0.00208	RWDD2E	KneeOA	Serotonergic-like n	-0.039	0.01284	0.00238	INPP1	HipOA	Astrocytes	-0.07419	0.024821	0.002799
PPIL3	FingerOA	Excitatory neurons	-0.26691	0.086749	0.002092	RWDD2E	KneeOA	Dopaminergic neur	-0.0319	0.0105	0.00238	APP	HipOA	Oligodendrocytes	0.067964	0.02277	0.002838
PPIL3	FingerOA	Inhibitory neurons	-0.18911	0.061463	0.002092	AQR	KneeOA	Oligodendrocytes	0.043274	0.01425	0.002391	INPP1	HipOA	Inhibitory neurons	-0.0474	0.015883	0.002841
C12orf73	HipOA	Excitatory neurons	-0.08958	0.029122	0.002099	PRIM2	FingerOA	Excitatory neurons	0.208618	0.068726	0.002401	PIGZ	HandOA	Excitatory neurons	-0.14515	0.048668	0.002859
MFSD13A	HipOA	Serotonergic-like neu	-0.07072	0.023001	0.002106	GSTP1	KneeOA	Serotonergic-like n	0.0389	0.01282	0.0024	PIGZ	HandOA	Astrocytes	-0.06846	0.022953	0.002859
AC087280	SpineOA	Inhibitory neurons	-0.06434	0.020944	0.002127	GSTP1	KneeOA	Dopaminergic neur	0.03793	0.0125	0.0024	ZSCAN31	KneeOA	Astrocytes	0.053263	0.017864	0.002867
ADSL	FingerOA	Dopaminergic neur	0.151217	0.049275	0.002149	LTBP1	KneeOA	Oligodendrocytes	0.04377	0.014429	0.002418	LY6D	HipOA	Excitatory neurons	0.081368	0.027291	0.002868
SPECC1	KneeOA	Astrocytes	0.109707	0.035749	0.002149	AL121656	KneeOA	Oligodendrocytes	0.048561	0.016009	0.002418	ZSCAN31	KneeOA	Endothelial cells	0.040217	0.013491	0.002873
SHMT1	SpineOA	Excitatory neurons	0.086857	0.028346	0.002183	MIR4713F	KneeOA	Astrocytes	-0.04435	0.014621	0.002421	CHAD	SpineOA	Excitatory neurons	0.046607	0.015646	0.002893
WNK1	KneeOA	Excitatory neurons	-0.14412	0.047055	0.002193	MIR4713F	KneeOA	Inhibitory neurons	-0.03985	0.013138	0.002421	HLA-DQB	HandOA	Microglia	-0.05687	0.019133	0.002955
LCN15	KneeOA	Serotonergic-like n	-0.034	0.0111	0.00222	IPP	HipOA	Excitatory neurons	0.086734	0.0286	0.002424	POLR2L	ThumbOA	Serotonergic-like neu	-0.22154	0.074552	0.002962
LINC0106	KneeOA	Excitatory neurons	0.038189	0.012491	0.002234	FAM182B	SpineOA	Excitatory neurons	0.026701	0.008808	0.002433	CTSB	HipOA	Dopaminergic neur	-0.05306	0.01786	0.002968
AL160408	HipOA	Microglia	0.058473	0.019135	0.002244	CD151	KneeOA	Astrocytes	0.054823	0.018088	0.002439	MX1	ThumbOA	Excitatory neurons	-0.11247	0.037863	0.002974
SERPIND1	HandOA	Astrocytes	-0.12928	0.042317	0.002251	ANKRD65	HandOA	Oligodendrocytes	-0.15099	0.049818	0.002439	MARK1	FingerOA	Astrocytes	-0.1275	0.042964	0.003001
NFATC4	KneeOA	Serotonergic-like n	0.03239	0.01061	0.00225	SBF2	KneeOA	Oligodendrocytes	-0.04952	0.016343	0.002446	SPOCK2	HipOA	Serotonergic-like neu	0.078151	0.026337	0.003004
GREB1	HipOA	Oligodendrocytes	0.068656	0.022478	0.002256	KTN1	KneeOA	Serotonergic-like n	0.03316	0.01095	0.00245	ARHGAP2	KneeOA	Excitatory neurons	0.04137	0.013945	0.00301
AIFM2	ThumbOA	Excitatory neurons	0.088363	0.028933	0.002258	KTN1	KneeOA	Dopaminergic neur	0.05531	0.01826	0.00245	AC007376	FingerOA	Excitatory neurons	0.221831	0.074827	0.003031
SAR1A	ThumbOA	Serotonergic-like neu	0.082085	0.026878	0.002258	TMEM255	ThumbOA	Serotonergic-like neu	-0.07957	0.026283	0.002466	CAPRIN2	HandOA	Oligodendrocytes	0.111742	0.03775	0.003076
EXOSC6	SpineOA	Excitatory neurons	-0.1193	0.039076	0.002265	CTSB	HipOA	Serotonergic-like neu	-0.04975	0.016448	0.002489	NPIP13	HipOA	Astrocytes	0.06926	0.023422	0.003106
UQCCL1	HipOA	Serotonergic-like neu	0.098072	0.032128	0.002269	XRCC5	HandOA	Oligodendrocytes	0.079859	0.026431	0.002516	NPIP13	HipOA	Oligodendrocytes	0.04477	0.01514	0.003106
NPIP13	HipOA	OPC/COP	0.071072	0.024035	0.003106	CDK10	HipOA	Serotonergic-like neu	-0.04552	0.015573	0.003465	MIR181A	KneeOA	Serotonergic-like n	-0.0522	0.01818	0.00406
NPIP13	HipOA	Excitatory neurons	0.104569	0.035363	0.003106	RPN1	KneeOA	Oligodendrocytes	-0.0509	0.01742	0.003477	EEFSEC	HipOA	Excitatory neurons	0.1006	0.035019	0.004069
NPIP13	HipOA	Inhibitory neurons	0.093405	0.031587	0.003106	HLA-DQB	FingerOA	Microglia	-0.06792	0.023269	0.003515	ACOT1	HipOA	Excitatory neurons	-0.06032	0.020998	0.004072
NPIP13	HipOA	Microglia	0.056063	0.018959	0.003106	KNOP1	ThumbOA	Astrocytes	-0.06114	0.020948	0.003516	TSPAN2	FingerOA	Dopaminergic neur	0.165733	0.057732	0.004095
TRAF3	KneeOA	Inhibitory neurons	0.058088	0.019649	0.003113	CAPN8	FingerOA	Astrocytes	0.106057	0.036396	0.003569	DDX42	HandOA	Dopaminergic neur	-0.09294	0.032403	0.004128
PACS1	KneeOA	Excitatory neurons	-0.10414	0.035226	0.003113	LARGE2	KneeOA	Serotonergic-like n	-0.064	0.022	0.00362	IGHMBP2	KneeOA	Oligodendrocytes	0.035186	0.012274	0.004147
KLHL18	ThumbOA	Serotonergic-like neu	0.113847	0.038534	0.003132	FAM89A	HandOA	Astrocytes	-0.06882	0.023666	0.003638	CARMIL1	HipOA	Microglia	0.046082	0.016078	0.004155
INPP5E	ThumbOA	Excitatory neurons	-0.15229	0.051559	0.003141	RAB15	KneeOA	Serotonergic-like n	0.05155	0.01773	0.00365	TDRD5	KneeOA	Excitatory neurons	-0.03294	0.011497	0.004172
AP006621	FingerOA	Excitatory neurons	0.083528	0.028301	0.003163	RNF144A	SpineOA	Oligodendrocytes	0.069304	0.023858	0.003674	MTCH2	KneeOA	Dopaminergic neur	-0.0402	0.01403	0.00418
TESK2	HandOA	Astrocytes	-0.06179	0.020968	0.003209	POLQ	SpineOA	Excitatory neurons	-0.03882	0.013363	0.003675	FEZ2	KneeOA	Dopaminergic neur	-0.0398	0.01391	0.00419
AC027020	ThumbOA	Oligodendrocytes	0.061918	0.021011	0.00321	VWDE	ThumbOA	Excitatory neurons	-0.06577	0.022655	0.003695	ADAL	KneeOA	Oligodendrocytes	-0.04147	0.014483	0.004196
AC027020	ThumbOA	Astrocytes	0.053561	0.018176	0.00321	MPHOSPI	SpineOA	Dopaminergic neur	-0.07563	0.026057	0.003702	TM6SF2	HipOA	Excitatory neurons	-0.07884	0.027547	0.004209
LINS1	ThumbOA	Excitatory neurons	0.09458	0.032095	0.00321	RAD51C	FingerOA	Excitatory neurons	0.083579	0.028802	0.00371	DNPH1	SpineOA	Dopaminergic neur	-0.04905	0.017143	0.004218
LINS1	ThumbOA	Inhibitory neurons	0.12588	0.042717	0.00321	GCAT	KneeOA	Serotonergic-like n	0.05611	0.01934	0.00371	IGHMBP2	KneeOA	Endothelial cells	0.040861	0.014289	0.004241
AC027020	ThumbOA	Inhibitory neurons	0.103149	0.035003	0.00321	GCAT	KneeOA	Dopaminergic neur	0.04307	0.01484	0.00371	CACNA1C	SpineOA	OPC/COP	0.052596	0.018413	0.004285
AC027020	ThumbOA	OPC/COP	0.0829	0.028131	0.00321	SCARB1	ThumbOA	Oligodendrocytes	0.128213	0.044193	0.003717	AC005332	FingerOA	Excitatory neurons	0.139905	0.048991	0.004294
AC127024	HipOA	Excitatory neurons	-0.07205	0.024468	0.003234	MYSM1	SpineOA	Astrocytes	0.093138	0.032122	0.003737	CLBA1	SpineOA	Serotonergic-like neu	-0.09345	0.032752	0.004327
DUSP16	HipOA	Excitatory neurons	-0.06533	0.022189	0.003239	MYSM1	SpineOA	Excitatory neurons	0.065675	0.02265	0.003737	PLEKHG5	HandOA	Excitatory neurons	0.103079	0.036128	0.004329
GGACT	ThumbOA	Serotonergic-like neu	0.158075	0.053729	0.00326	CLTCL1	KneeOA	Excitatory neurons	0.047992	0.016556	0.003747	MAP2K5	KneeOA	Endothelial cells	0.062076	0.02177	0.004352
RUNX2	SpineOA	Oligodendrocytes	0.028877	0.009819	0.003272	ANAPC4	KneeOA	Excitatory neurons	0.08435	0.029144	0.003801	AC245884	FingerOA	Oligodendrocytes	0.12063	0.042307	0.004354
LINC0153	SpineOA	Excitatory neurons	0.044442	0.015117	0.003283	MAN1A1	KneeOA	Serotonergic-like n	-0.0588	0.02033	0.00381	CD151	ThumbOA	OPC/COP	0.087839	0.030811	0.00436
ADNP	HandOA	Dopaminergic neur	-0.09436	0.032138	0.003324	MMD2	KneeOA	Astrocytes	0.127651	0.044138	0.003827	BDNF-AS	KneeOA	Dopaminergic neur	-0.0624	0.0219	0.00437
SGCB	HipOA	Dopaminergic neur	0.075863	0.025847	0.003335	BNIP3	KneeOA	Dopaminergic neur	-0.1262	0.04367	0.00384	RPS6KA5	SpineOA	Oligodendrocytes	0.062311	0.021879	0.004399
MRPS14	KneeOA	Dopaminergic neur	-0.0375	0.01277	0.003335	AATF	SpineOA	Oligodendrocytes	-0.04335	0.014999	0.003853	KNOP1	ThumbOA	Oligodendrocytes	-0.06651	0.023353	0.004401
C1QTNF7	ThumbOA	Excitatory neurons	0.107123	0.03658	0.003406	FAM182B	HipOA	Astrocytes	0.038061	0.013176	0.00387	TMEM50E	SpineOA	Serotonergic-like neu	0.057482	0.020197	0.004426
SPOCK2	KneeOA	Serotonergic-like n	-0.0603	0.0206	0.00341	PEX13	ThumbOA	Dopaminergic neur	0.131712	0.045608	0.003878	FEZ2	KneeOA	Excitatory neurons	-0.05901	0.020778	0.00451
TXNL4B	ThumbOA	Astrocytes	0.082972	0.028343	0.003418	RAD51C	FingerOA	Inhibitory neurons	0.083043	0.028783	0.003913	CEP85	KneeOA	Excitatory neurons	-0.06302	0.022194	0.004519
TXNL4B	ThumbOA	OPC/COP	0.089922	0.030717	0.003418	GSTM3	KneeOA	Astrocytes	-0.0455	0.015786	0.003951	KTN1	HipOA	Serotonergic-like neu	0.039737	0.013997	0.004526
HLA-DQB	FingerOA	Endothelial cells	0.075411	0.025762	0.00342	GSTM3	KneeOA	Inhibitory neurons	-0.05678	0.019701	0.003951	KTN1	HipOA	Dopaminergic neur	0.066277	0.023345	0.004526
RPS10	ThumbOA	Serotonergic-like neu	0.072669	0.024845	0.003446	TCEA3	SpineOA	Inhibitory neurons	-0.05104	0.017743	0.004017	KNOP1	ThumbOA	Excitatory neurons	-0.08146	0.028695	0.004527
TMEM255	FingerOA	Serotonergic-like neu	-0.08153	0.027878	0.003449	SERHL2	HipOA	Oligodendrocytes	0.055136	0.019184	0.004052	KNOP1	ThumbOA	Serotonergic-like neu	-0.07767	0.02736	0.004527
IPP	ThumbOA	Excitatory neurons															

NDST4	HandOA	Dopaminergic neuron	-0.06956	0.024525	0.004566	MOV10	HipOA	Excitatory neurons	-0.0657	0.02344	0.005064	CCDC146	HipOA	Oligodendrocytes	0.049732	0.017905	0.005478
PHLDB3	HandOA	Excitatory neurons	-0.08464	0.029844	0.004567	FMO4	FingerOA	Endothelial cells	0.091427	0.032633	0.005084	AIMP1	HipOA	Serotonergic-like neuron	-0.07151	0.02576	0.005503
MICA	KneeOA	Excitatory neurons	0.054621	0.019268	0.004585	SYNRG	KneeOA	Astrocytes	-0.0449	0.016037	0.005112	ADGRB3	HandOA	Oligodendrocytes	0.053209	0.019169	0.005506
ST3GAL4	KneeOA	Oligodendrocytes	-0.04852	0.017131	0.00462	SNRNP25	ThumbOA	Serotonergic-like neuron	-0.09346	0.03339	0.005127	NSF	HipOA	Excitatory neurons	0.036027	0.012981	0.005513
RAB15	KneeOA	Dopaminergic neuron	0.06709	0.02371	0.00466	EXOC3	HandOA	Oligodendrocytes	-0.09579	0.034223	0.005128	PREX2	HipOA	Oligodendrocytes	-0.05296	0.019084	0.005521
PIK3R3	KneeOA	Serotonergic-like neuron	0.04451	0.01573	0.00467	RPL8	FingerOA	Dopaminergic neuron	0.331219	0.118353	0.005133	FAM227A	HipOA	Excitatory neurons	-0.09478	0.034157	0.005525
CARMIL1	KneeOA	Microglia	0.035569	0.012577	0.004682	GATM	HandOA	Dopaminergic neuron	-0.06615	0.023645	0.00515	MROH6	KneeOA	Serotonergic-like neuron	-0.0646	0.02329	0.00554
INPP1	HipOA	OPC/COP	-0.06482	0.022922	0.004683	GPR171	KneeOA	Astrocytes	-0.03569	0.012765	0.005173	RAD51C	KneeOA	Inhibitory neurons	0.033892	0.012217	0.005535
COP1	HipOA	Excitatory neurons	-0.16976	0.060027	0.004684	GPR171	KneeOA	Excitatory neurons	-0.02968	0.010614	0.005173	GPR55	KneeOA	Excitatory neurons	0.042268	0.015244	0.005557
TRIM66	HandOA	Astrocytes	0.086611	0.030628	0.004687	GPR171	KneeOA	OPC/COP	-0.04631	0.016561	0.005173	U2AF1	HandOA	Astrocytes	0.050799	0.018322	0.005561
TRIM66	HandOA	OPC/COP	0.066903	0.023659	0.004687	GPR171	KneeOA	Serotonergic-like neuron	-0.0184	0.00659	0.00517	U2AF1	HandOA	Excitatory neurons	0.049215	0.01775	0.005561
PTPN13	SpineOA	OPC/COP	-0.1244	0.044006	0.0047	ANTXR1	KneeOA	Astrocytes	-0.10068	0.036025	0.005193	U2AF1	HandOA	Microglia	0.056381	0.020335	0.005561
HSD17B4	KneeOA	Oligodendrocytes	0.026655	0.009433	0.004715	LURAP1	SpineOA	Astrocytes	0.042138	0.015084	0.005212	U2AF1	HandOA	Oligodendrocytes	0.041577	0.014996	0.005561
PLAC8	HipOA	Microglia	-0.058	0.020524	0.004715	VPS36	ThumbOA	Dopaminergic neuron	0.160118	0.057317	0.005213	MSH6	ThumbOA	Oligodendrocytes	-0.12727	0.045904	0.005563
ZNF37A	HipOA	Serotonergic-like neuron	-0.0738	0.026117	0.004716	FAM19A2	ThumbOA	OPC/COP	-0.08036	0.028771	0.00522	CAMLG	HipOA	Excitatory neurons	-0.0777	0.028031	0.005572
KNOP1	ThumbOA	Inhibitory neurons	-0.10925	0.038668	0.004722	ADAM10	FingerOA	Oligodendrocytes	-0.12467	0.044636	0.005223	CAMLG	HipOA	Inhibitory neurons	-0.07868	0.028385	0.005572
KNOP1	ThumbOA	OPC/COP	-0.09533	0.033741	0.004722	U2AF1	HandOA	Endothelial cells	0.05885	0.02108	0.005242	CAMLG	HipOA	Serotonergic-like neuron	-0.04254	0.015347	0.005572
SUPT3H	SpineOA	Oligodendrocytes	0.075741	0.026821	0.004743	U2AF1	HandOA	Inhibitory neurons	0.057158	0.020474	0.005242	CAMLG	HipOA	Dopaminergic neuron	-0.04327	0.01561	0.005572
RAD51C	KneeOA	Excitatory neurons	0.034502	0.012222	0.004757	U2AF1	HandOA	OPC/COP	0.050674	0.018151	0.005242	LINC0111	SpineOA	Astrocytes	-0.07071	0.025513	0.00558
CERS5	KneeOA	Oligodendrocytes	-0.02922	0.010356	0.004774	U2AF1	HandOA	Pericyte	0.075948	0.027204	0.005242	LINC0111	SpineOA	OPC/COP	-0.04971	0.017936	0.00558
TM6SF2	SpineOA	Excitatory neurons	-0.08638	0.030621	0.00479	KIAA0930	KneeOA	Oligodendrocytes	0.034432	0.012337	0.005254	PKD2	HandOA	Oligodendrocytes	0.106581	0.038467	0.005593
PDXK	SpineOA	Microglia	-0.03654	0.012964	0.004829	TMEM50E	SpineOA	Astrocytes	0.075199	0.026963	0.005288	PIK3R3	ThumbOA	Dopaminergic neuron	0.105858	0.038214	0.005603
FAM149A	HandOA	Serotonergic-like neuron	0.111715	0.03968	0.004872	HLA-DQB	ThumbOA	Microglia	0.095544	0.034305	0.005351	ARL14EP	KneeOA	Excitatory neurons	-0.06525	0.023556	0.005605
TMEM176	KneeOA	OPC/COP	-0.03606	0.012809	0.004878	EFCAB7	HipOA	Excitatory neurons	-0.11437	0.041075	0.005364	RGPD8	SpineOA	Excitatory neurons	-0.09218	0.033309	0.005649
LINC0126	FingerOA	Microglia	0.098973	0.035186	0.00491	PPHLN1	HipOA	Oligodendrocytes	0.050314	0.018071	0.005365	RGPD8	SpineOA	Oligodendrocytes	-0.05086	0.018377	0.005649
GOLGA6L	HipOA	OPC/COP	-0.06156	0.021888	0.004916	FAM193B	HipOA	Excitatory neurons	-0.13991	0.050268	0.00538	RGPD8	SpineOA	Astrocytes	-0.0803	0.029014	0.005649
AC010422	ThumbOA	Oligodendrocytes	0.127806	0.04549	0.004961	UROS	ThumbOA	Excitatory neurons	0.176057	0.063312	0.005423	CACNA1C	HandOA	OPC/COP	-0.05911	0.021363	0.005656
DPYSL5	KneeOA	Oligodendrocytes	0.035298	0.012575	0.005	BCCIP	HandOA	Excitatory neurons	0.107747	0.038747	0.005423	GPS2	HandOA	Excitatory neurons	-0.11059	0.039985	0.00568
MYO5A	KneeOA	Oligodendrocytes	0.040436	0.014412	0.005019	ASAP3	SpineOA	Inhibitory neurons	-0.06104	0.021952	0.005429	EIF5A	HandOA	Serotonergic-like neuron	0.027321	0.009878	0.00568
CDK10	FingerOA	Excitatory neurons	0.174728	0.062278	0.005022	HLA-DQB	HandOA	Endothelial cells	0.050189	0.018056	0.005442	EIF5A	HandOA	Dopaminergic neuron	0.026812	0.009694	0.00568
CDK10	HandOA	Astrocytes	0.115564	0.041215	0.005048	GATM	HandOA	Oligodendrocytes	-0.06475	0.023305	0.005461	EIF5A	HandOA	Excitatory neurons	0.068587	0.024801	0.005684
EFCAB13	FingerOA	Excitatory neurons	0.161385	0.057556	0.005048	D2HGDH	HipOA	Dopaminergic neuron	-0.09168	0.033	0.005464	NFATC4	KneeOA	Dopaminergic neuron	0.0567	0.02051	0.0057
GATM	KneeOA	Dopaminergic neuron	-0.03882	0.01381	0.00571	FBXL4	SpineOA	Excitatory neurons	-0.1042	0.038075	0.006206	C6orf62	HipOA	Dopaminergic neuron	-0.0699	0.025828	0.006801
F11	ThumbOA	Astrocytes	0.101294	0.036659	0.005725	AC024257	HandOA	Microglia	-0.09516	0.034795	0.006241	COL11A2	KneeOA	Oligodendrocytes	-0.0544	0.020123	0.00686
IQANK1	FingerOA	Excitatory neurons	-0.13504	0.048882	0.005734	GATM	HandOA	Serotonergic-like neuron	-0.05916	0.021654	0.00629	CAV1	HipOA	Oligodendrocytes	0.033686	0.012462	0.006871
HLA-DQA	FingerOA	Microglia	0.068506	0.024799	0.005737	CERS5	FingerOA	OPC/COP	0.065266	0.023904	0.006326	ASB18	KneeOA	Excitatory neurons	-0.0345	0.012763	0.006873
CYBRD1	KneeOA	Pericyte	0.04059	0.014694	0.005739	MDH1B	ThumbOA	Excitatory neurons	-0.08082	0.029604	0.006335	DMAC2L	ThumbOA	Dopaminergic neuron	-0.11355	0.042017	0.006882
AL513548	ThumbOA	Excitatory neurons	0.100108	0.03626	0.005765	ADAMTS	HandOA	OPC/COP	-0.05847	0.021422	0.006343	NT5C3A	KneeOA	Dopaminergic neuron	0.04178	0.01547	0.00691
AL513548	ThumbOA	Oligodendrocytes	0.076316	0.027642	0.005765	TESK2	KneeOA	Astrocytes	-0.03278	0.012012	0.006352	POLQ	HipOA	Excitatory neurons	-0.03234	0.011976	0.006922
C2orf73	SpineOA	Oligodendrocytes	-0.07793	0.028243	0.005793	PLB1	FingerOA	Microglia	0.101718	0.037287	0.006372	ZNF429	ThumbOA	Excitatory neurons	0.073091	0.027073	0.006939
AC078842	SpineOA	Astrocytes	0.07244	0.026258	0.005802	AL355353	ThumbOA	Excitatory neurons	0.13955	0.051157	0.006374	SESTD1	FingerOA	Inhibitory neurons	0.145499	0.053895	0.006941
AC078842	SpineOA	OPC/COP	0.082295	0.029384	0.005802	THAP17-A	KneeOA	Serotonergic-like neuron	-0.0468	0.01716	0.00639	PTPN13	SpineOA	Oligodendrocytes	-0.06126	0.022712	0.006988
ZNF273	FingerOA	Inhibitory neurons	-0.11347	0.041133	0.005807	ACOT1	HipOA	Astrocytes	-0.06513	0.023894	0.006414	PLEKHG5	FingerOA	Excitatory neurons	0.141697	0.052537	0.006995
PKN2	SpineOA	Oligodendrocytes	0.087812	0.031834	0.005808	PPHLN1	HipOA	OPC/COP	0.065058	0.02388	0.006442	BMP4	FingerOA	Serotonergic-like neuron	-0.08518	0.031584	0.006997
PSAP	ThumbOA	Dopaminergic neuron	0.200137	0.072577	0.005823	PQAR6	KneeOA	Serotonergic-like neuron	-0.0261	0.00959	0.00645	GATM	KneeOA	Oligodendrocytes	-0.03678	0.013639	0.006999
AC008759	ThumbOA	Microglia	0.123751	0.04491	0.005859	HAGH	HandOA	Dopaminergic neuron	-0.10759	0.039503	0.006455	ARF6	HipOA	Dopaminergic neuron	-0.07829	0.029073	0.007081
MRPS27	KneeOA	Excitatory neurons	0.053984	0.019602	0.005887	VCPKMT	KneeOA	Dopaminergic neuron	-0.056	0.02059	0.00649	CDK10	HipOA	Excitatory neurons	0.088039	0.032693	0.007084
C1GALT1	HipOA	OPC/COP	-0.06009	0.021821	0.005892	DDHD1	KneeOA	Oligodendrocytes	0.064112	0.023569	0.006525	NDUFA6	HipOA	Serotonergic-like neuron	-0.08845	0.032866	0.007117
MSH6	FingerOA	Oligodendrocytes	-0.13316	0.048377	0.005912	DNAAF4	KneeOA	Dopaminergic neuron	-0.0806	0.02965	0.00654	DMAC2L	ThumbOA	Excitatory neurons	-0.11133	0.041368	0.007118
PIGV	KneeOA	Excitatory neurons	0.046007	0.016718	0.005925	IGHMBP2	KneeOA	Microglia	0.039477	0.01452	0.006552	MRPL21	KneeOA	Serotonergic-like neuron	-0.0283	0.01052	0.00713
CRYBG3	HandOA	Excitatory neurons	0.065067	0.023645	0.005926	TBCA	HipOA	Dopaminergic neuron	0.056242	0.020692	0.006567	MRPS14	HipOA	Dopaminergic neuron	-0.04369	0.016237	0.007134
IGHMBP2	KneeOA	Excitatory neurons	0.04596	0.016703	0.005929	ST8SIA6-/	SpineOA	Serotonergic-like neuron	0.050894	0.018729	0.00658	GATM	ThumbOA	Dopaminergic neuron	-0.08769	0.0326	0.007149
AC009065	KneeOA	Excitatory neurons	0.064801	0.023558	0.005946	VSIG10	HipOA	Oligodendrocytes	-0.08546	0.031463	0.006605	SPATA33	FingerOA	Serotonergic-like neuron	0.138419	0.051503	0.007197
HLA-DM-A	KneeOA	OPC/COP	0.036122	0.013132	0.005947	AL513548	ThumbOA	Inhibitory neurons	0.121562	0.044792	0.006649	CLBA1	SpineOA	Dopaminergic neuron	-0.0726	0.027016	0.007207
LINC0029	HipOA	Astrocytes	0.073614	0.026772	0.005966	HLA-DM-A	KneeOA	Endothelial cells	0.030818	0.01136	0.006672	MINDY2	HandOA	Oligodendrocytes	-0.09047	0.033675	0.007222
EXOC3	HandOA	Serotonergic-like neuron	-0.08195	0.029805	0.005967	HLA-DM-A	KneeOA	Inhibitory neurons	0.02817	0.010384	0.006672	YBEY	FingerOA	Serotonergic-like neuron	-0.14295	0.053244	0.007256
SPTBN1	SpineOA	Oligodendrocytes	-0.07631	0.027761	0.005985	PDPK1	KneeOA	Astrocytes	0.046422	0.01712	0.006696	PANK4	HipOA	Serotonergic-like neuron	0.100281	0.037382	0.007306
PIK3R3	KneeOA	Dopaminergic neuron	0.04387	0.01596	0.00599	PDPK1	KneeOA	Inhibitory neurons	0.050814	0.01874	0.006696	TLK1	HandOA	Dopaminergic neuron	0.090083	0.033583	0.00731
TMEM50E	SpineOA	Oligodendrocytes	0.056792	0.02068	0.006027	ATG7	KneeOA	Oligodendrocytes	0.042649	0.015738	0.00673	VPS36	ThumbOA	Serotonergic-like neuron	0.156537	0.058366	0.007319
SMIM19	KneeOA	Dopaminergic neuron	-0.0859	0.03128	0.00603	MVB12B	SpineOA	Excitatory neurons	0.123226	0.045476	0.006735	CKAP2	ThumbOA	OPC/COP	-0.08687	0.03239	0.007319
STX4	HipOA	Serotonergic-like neuron	0.050296	0.018315	0.006031	TRIM66	HandOA	Microglia	0.063917	0.023592	0.006742	LSMEM1	KneeOA	Excitatory neurons	0.069256	0.025832	0.007339
KNOP1	ThumbOA	Endothelial cells	-0.0936	0.034092	0.006042	TGS1	HandOA	Excitatory neurons	-0.10014	0.03697	0.006757	KNSTRN	ThumbOA	Serotonergic-like neuron	0.056345	0.021023	0.007357
SYCE1L	KneeOA	Dopaminergic neuron	-0.0631	0.02298	0.00608	FAM182B	HipOA	Excitatory neurons	0.01901	0.007022	0.00679	CDK10	SpineOA	Inhibitory neurons	0.059327	0.02214	

DAW1	SpineOA	Excitatory neurons	-0.05946	0.02221	0.007425	APTR	KneeOA	Dopaminergic neur	-0.0532	0.02005	0.00791	VPS36	HipOA	Dopaminergic neur	0.08132	0.030905	0.008506
EGFR	HandOA	Astrocytes	-0.13458	0.050276	0.00743	COX11	SpineOA	Serotonergic-like neu	-0.07722	0.029075	0.007911	JAK1	KneeOA	Excitatory neurons	0.045748	0.017395	0.008538
HYAL3	HipOA	Dopaminergic neur	-0.05833	0.021794	0.007439	LINC0219	KneeOA	Oligodendrocytes	0.060735	0.022869	0.007912	XYLT2	ThumbOA	Excitatory neurons	-0.09234	0.035118	0.008551
HYAL3	HipOA	Excitatory neurons	-0.07673	0.028666	0.007439	RHBD1	HipOA	Astrocytes	0.07261	0.027346	0.007926	XYLT2	ThumbOA	Oligodendrocytes	-0.10084	0.03835	0.008551
HYAL3	HipOA	Serotonergic-like neu	-0.05566	0.020797	0.007439	CCDC91	SpineOA	Dopaminergic neur	-0.08122	0.030597	0.007939	AC009065	HandOA	Excitatory neurons	0.106576	0.040551	0.008583
PACS1	SpineOA	Excitatory neurons	-0.13404	0.050104	0.007468	DMGDH	KneeOA	Astrocytes	-0.06936	0.026139	0.007969	PACSIN2	FingerOA	OPC/COP	-0.08415	0.03202	0.008589
ZNF880	HandOA	Astrocytes	0.053188	0.019888	0.007488	STXBP4	KneeOA	Astrocytes	0.055978	0.021106	0.007997	ABHD14	KneeOA	Serotonergic-like n	-0.05	0.01904	0.00863
CLUL1	HipOA	Serotonergic-like neu	0.057267	0.021424	0.007517	PDPK1	KneeOA	Excitatory neurons	0.046407	0.017498	0.007997	DDX4	HipOA	Oligodendrocytes	0.070924	0.027006	0.008634
SYCE3	FingerOA	Serotonergic-like neu	-0.06121	0.0229	0.007519	ACADS	HandOA	Excitatory neurons	-0.05801	0.021879	0.008013	ARFGAP3	FingerOA	Endothelial cells	-0.0734	0.027958	0.008655
CHKB-DT	FingerOA	Serotonergic-like neu	-0.15113	0.056541	0.007519	LINC0083	KneeOA	Excitatory neurons	-0.02414	0.009111	0.008068	SESTD1	FingerOA	Oligodendrocytes	0.112975	0.043032	0.008656
POGLUT1	HandOA	Excitatory neurons	0.087672	0.032802	0.007522	TRMT9B	FingerOA	Astrocytes	-0.07407	0.027963	0.008072	PACRG	KneeOA	Oligodendrocytes	-0.05606	0.021364	0.008688
DAAM2	HandOA	Oligodendrocytes	-0.11729	0.04392	0.007571	SYCE3	KneeOA	Dopaminergic neur	-0.077	0.02907	0.00808	FEZ2	HipOA	Dopaminergic neur	-0.0436	0.016618	0.00869
CINP	KneeOA	Serotonergic-like n	-0.1052	0.03942	0.00758	AC009065	ThumbOA	Excitatory neurons	0.147036	0.055525	0.008094	XRCC1	HandOA	Serotonergic-like neu	-0.07126	0.027161	0.008698
PGAP6	SpineOA	Serotonergic-like neu	0.071737	0.026873	0.007598	TCEA3	ThumbOA	Serotonergic-like neu	-0.16192	0.061144	0.008095	STX4	FingerOA	Serotonergic-like neu	-0.09332	0.035585	0.008729
NBAS	HandOA	Inhibitory neurons	0.124424	0.046612	0.0076	ECM2	HipOA	Astrocytes	0.0723	0.027308	0.008106	LINC0193	HipOA	Excitatory neurons	-0.06924	0.02642	0.008778
KLHDC4	ThumbOA	Astrocytes	0.061494	0.023052	0.00764	TUBGCP4	HipOA	Dopaminergic neur	-0.0395	0.014926	0.008142	MRAS	HipOA	Inhibitory neurons	0.060904	0.023246	0.008793
KLHDC4	ThumbOA	Excitatory neurons	0.045362	0.017005	0.00764	AC009065	FingerOA	Excitatory neurons	0.154931	0.058551	0.008143	SPATA33	HipOA	Serotonergic-like neu	0.069502	0.026532	0.008804
KLHDC4	ThumbOA	Inhibitory neurons	0.04746	0.017792	0.00764	ANKRD61	FingerOA	Excitatory neurons	-0.09598	0.03628	0.008153	SMIM19	KneeOA	Serotonergic-like n	-0.035	0.01337	0.00882
KLHDC4	ThumbOA	Microglia	0.077253	0.02896	0.00764	CYBRD1	KneeOA	Oligodendrocytes	0.022788	0.008618	0.008188	ASAP3	SpineOA	Excitatory neurons	-0.07832	0.029912	0.008834
KLHDC4	ThumbOA	Oligodendrocytes	0.052541	0.019696	0.00764	OSTF1	HipOA	Dopaminergic neur	0.076321	0.028864	0.008189	GJB7	HipOA	Serotonergic-like neu	0.039533	0.015102	0.008851
MAST3	ThumbOA	Dopaminergic neur	0.083293	0.031226	0.007643	VAMP3	HipOA	Serotonergic-like neu	0.07111	0.026904	0.008215	CERS5	FingerOA	Excitatory neurons	0.068002	0.02599	0.008885
TOX3	HandOA	Oligodendrocytes	-0.12718	0.047682	0.007646	CD151	FingerOA	Serotonergic-like neu	0.147977	0.05599	0.008219	ABHD12	SpineOA	Serotonergic-like neu	-0.05494	0.021	0.00889
PPIL3	FingerOA	Serotonergic-like neu	-0.05899	0.022125	0.007672	FUBP1	KneeOA	Dopaminergic neur	-0.0672	0.02547	0.00829	ADGRB3	FingerOA	Oligodendrocytes	0.071424	0.027307	0.008908
PPIL3	FingerOA	Dopaminergic neur	-0.05684	0.021318	0.007672	AC011462	HipOA	Inhibitory neurons	0.051945	0.019684	0.008317	CDO1	KneeOA	Serotonergic-like n	0.04787	0.01831	0.00893
OSTF1	HipOA	Serotonergic-like neu	0.041404	0.015534	0.007691	SCMH1	SpineOA	Oligodendrocytes	0.069757	0.026438	0.008326	OSGEP	FingerOA	Oligodendrocytes	-0.13785	0.052776	0.009003
RILPL2	KneeOA	Oligodendrocytes	-0.05626	0.021131	0.007754	MYO6	HandOA	Astrocytes	-0.0795	0.030134	0.008335	ZBTB32	ThumbOA	Astrocytes	0.133787	0.051232	0.009017
PAH	KneeOA	OPC/COP	0.034494	0.012961	0.007782	SIRT6	HandOA	Dopaminergic neur	0.103843	0.039382	0.008369	SKAP2	HipOA	Excitatory neurons	0.074794	0.028646	0.009028
PAH	KneeOA	Excitatory neurons	0.030997	0.011647	0.007782	MTAP	HandOA	OPC/COP	0.082274	0.031211	0.008388	SNRNP25	FingerOA	Serotonergic-like neu	-0.08914	0.034162	0.009069
PAH	KneeOA	Inhibitory neurons	0.031618	0.01188	0.007782	TMEM12	KneeOA	Dopaminergic neur	0.06393	0.02426	0.0084	DAAM1	KneeOA	Dopaminergic neur	-0.0356	0.01364	0.00907
NDST4	ThumbOA	Dopaminergic neur	-0.08813	0.033139	0.007829	DDX42	ThumbOA	Dopaminergic neur	-0.011743	0.044587	0.008443	CYB561	HandOA	Excitatory neurons	-0.02154	0.008263	0.009132
IRAK1BP	KneeOA	Serotonergic-like n	0.08709	0.03277	0.00788	ZNF880	ThumbOA	Astrocytes	0.071951	0.027323	0.008456	VKORC1	HipOA	Serotonergic-like neu	0.089893	0.034482	0.009135
SIRT6	KneeOA	Dopaminergic neur	0.05859	0.02205	0.00789	COLGAL1	SpineOA	Astrocytes	0.03903	0.014822	0.00846	NDST4	FingerOA	Dopaminergic neur	-0.09017	0.034601	0.009158
MRPL21	KneeOA	Dopaminergic neur	-0.0218	0.00839	0.00929	KNOP1	KneeOA	OPC/COP	-0.03535	0.013688	0.009806	ITGB3BP	HipOA	Dopaminergic neur	-0.03275	0.012753	0.01022
RPN1	KneeOA	Astrocytes	-0.03633	0.013973	0.009319	ACAP2	KneeOA	Astrocytes	-0.02101	0.008135	0.009807	NFATC4	HipOA	Serotonergic-like neu	0.034612	0.01348	0.01024
C19orf57	HipOA	Excitatory neurons	0.088315	0.033971	0.009329	AL034417	HandOA	Oligodendrocytes	0.068199	0.026411	0.009817	LINC0153	ThumbOA	Excitatory neurons	0.056254	0.021912	0.01025
BICD2	KneeOA	Oligodendrocytes	-0.06249	0.024043	0.009347	ROR2	ThumbOA	OPC/COP	-0.05815	0.022528	0.009845	HEBP1	HipOA	Serotonergic-like neu	-0.05796	0.022587	0.01029
LINC0050	HipOA	Excitatory neurons	-0.07871	0.030286	0.009353	KLHL23	SpineOA	Dopaminergic neur	0.059576	0.023085	0.00986	NDRG4	KneeOA	Excitatory neurons	-0.0917	0.035743	0.0103
BDNF-AS	ThumbOA	Dopaminergic neur	-0.14028	0.053982	0.00936	PWWP2A	KneeOA	Dopaminergic neur	0.04317	0.01673	0.00987	DAAM1	KneeOA	Serotonergic-like n	-0.0365	0.01425	0.01035
AKAP10	KneeOA	Dopaminergic neur	-0.0483	0.01859	0.00936	ASPHD1	HipOA	Oligodendrocytes	0.081893	0.031741	0.009879	TRMT9B	HandOA	Astrocytes	-0.05163	0.020139	0.01036
EXOC3	KneeOA	Dopaminergic neur	-0.0519	0.01998	0.00937	KCTD13	HipOA	Oligodendrocytes	0.061096	0.02368	0.009879	C1GALT1	HipOA	Inhibitory neurons	-0.05969	0.023298	0.0104
CCDC80	ThumbOA	Dopaminergic neur	-0.09662	0.037189	0.009376	KRTCAP3	KneeOA	Excitatory neurons	0.048913	0.018964	0.0099	CCDC178	SpineOA	Excitatory neurons	-0.07249	0.028311	0.01045
CCDC80	ThumbOA	Serotonergic-like neu	-0.03442	0.013247	0.009376	ACADS	HandOA	Inhibitory neurons	-0.06396	0.024797	0.009902	CERS5	KneeOA	Dopaminergic neur	0.068774	0.02685	0.01047
RPS10	ThumbOA	Dopaminergic neur	0.065691	0.025289	0.009389	PRKCA	HandOA	Oligodendrocytes	0.047346	0.018357	0.009905	EYA4	HipOA	Oligodendrocytes	-0.03427	0.01339	0.01048
HLA-B	KneeOA	OPC/COP	-0.0461	0.017748	0.009391	ZSWIM7	KneeOA	Serotonergic-like n	-0.0178	0.00691	0.00992	RPS26	HandOA	Endothelial cells	-0.06566	0.025658	0.0105
KDEL2	FingerOA	Oligodendrocytes	-0.09156	0.035271	0.009435	ZSWIM7	KneeOA	Dopaminergic neur	-0.0172	0.00668	0.00992	RPS26	HandOA	Excitatory neurons	-0.11393	0.044522	0.0105
GALNT10	ThumbOA	Serotonergic-like neu	-0.06823	0.026294	0.009466	AP003071	HandOA	Astrocytes	0.101812	0.039496	0.009944	RPS26	HandOA	Serotonergic-like neu	-0.02677	0.01046	0.0105
TOR3A	FingerOA	Serotonergic-like neu	-0.12196	0.047012	0.00948	FBXO7	KneeOA	Astrocytes	0.04673	0.01813	0.009951	RPS26	HandOA	Dopaminergic neur	-0.02783	0.010874	0.0105
TIPIN	HipOA	Microglia	-0.04378	0.016803	0.009515	FBXO7	KneeOA	Excitatory neurons	0.060995	0.023664	0.009951	RPN1	KneeOA	Serotonergic-like n	-0.0527	0.02059	0.01053
MKKS	KneeOA	Excitatory neurons	0.078429	0.030252	0.009527	BNIP3	HandOA	Dopaminergic neur	-0.18761	0.072788	0.009954	CASP7	KneeOA	Excitatory neurons	-0.04167	0.016294	0.01055
LY6D	SpineOA	Excitatory neurons	0.079297	0.030598	0.009553	IPP	SpineOA	Excitatory neurons	0.081495	0.031631	0.009982	SRD5A3	SpineOA	Oligodendrocytes	0.067304	0.026319	0.01055
TBCK	KneeOA	Serotonergic-like n	-0.0508	0.01961	0.00958	CAPN9	HandOA	Oligodendrocytes	0.084443	0.032787	0.01001	SRD5A3	SpineOA	Serotonergic-like neu	0.034506	0.013493	0.01055
LINC0153	SpineOA	Astrocytes	0.067778	0.026168	0.009595	PGAP6	SpineOA	Dopaminergic neur	0.060067	0.023326	0.01002	CCZ1B	ThumbOA	Astrocytes	-0.11379	0.044512	0.01058
RBMS2	HipOA	Serotonergic-like neu	-0.07394	0.028552	0.009604	SESTD1	FingerOA	Excitatory neurons	0.083382	0.032384	0.01003	PKD2	FingerOA	Oligodendrocytes	0.142585	0.055786	0.01059
GOLT1A	ThumbOA	Excitatory neurons	0.114618	0.044264	0.009614	MARCH2	KneeOA	Excitatory neurons	-0.06781	0.026335	0.01003	CPNE1	FingerOA	Serotonergic-like neu	0.042606	0.016687	0.010673
STAP2	HandOA	Serotonergic-like neu	0.043915	0.016961	0.009619	PIK3R3	ThumbOA	Serotonergic-like neu	0.097345	0.037817	0.01005	LINC0150	ThumbOA	Microglia	0.07021	0.027505	0.01069
PRIM2	HandOA	Excitatory neurons	0.144855	0.055967	0.009648	LINC0201	KneeOA	Oligodendrocytes	-0.04037	0.015686	0.01006	CLIC6	FingerOA	OPC/COP	0.087986	0.034468	0.01069
AC003005	ThumbOA	Excitatory neurons	-0.07364	0.026879	0.009718	CADM2	SpineOA	Oligodendrocytes	0.042961	0.016705	0.010119	TPM2	KneeOA	Astrocytes	-0.03573	0.014002	0.01071
NBAS	KneeOA	Inhibitory neurons	0.070995	0.02746	0.009727	AC023790	HipOA	Excitatory neurons	0.036495	0.014191	0.01012	TPM2	KneeOA	Excitatory neurons	-0.03532	0.013841	0.01071
ITGB3BP	HipOA	Oligodendrocytes	-0.03145	0.012173	0.009781	TUBGCP4	HipOA	Serotonergic-like neu	-0.04568	0.017769	0.01014	MYO6	FingerOA	Excitatory neurons	0.125581	0.049208	0.01071
ITGB3BP	HipOA	OPC/COP	-0.03391	0.013126	0.009781	HLA-DM*	HandOA	Oligodendrocytes	0.033251	0.012938	0.010168	MYO6	FingerOA	Inhibitory neurons	0.127381	0.049914	0.01071
ITGB3BP	HipOA	Serotonergic-like neu	-0.02565	0.00993	0.009781	ZNF738	ThumbOA	Inhibitory neurons	-0.10611	0.041298	0.01019	TAF1B	KneeOA	Excitatory neurons	-0.0436	0.017086	0.01072
DNAH11	HandOA	Endothelial cells	0.072737	0.028162	0.0098	PLCD4	HandOA	OPC/COP	-0.06705	0.0261	0.0102	VIPR2	HandOA	Excitatory neurons	0.099524	0.039018	0.01075
DNAH11	HandOA	Pericyte	0.049766	0.019268	0.0098	TTC19	SpineOA	Excitatory neurons	-0.06276	0.024434	0.01021	CCDC88B	HandOA	Astrocytes	0.084248	0.033033	0.01076
KNOP1	KneeOA	Inhibitory neurons	-0.04051	0.015687	0.009806	NDUFB3	SpineOA	Serotonergic-like neu									

BRK1	KneeOA	Dopaminergic neur	-0.0689	0.02702	0.01079	PLPP2	HandOA	Serotonergic-like neu	-0.04756	0.018793	0.01139	ZNF502	KneeOA	Excitatory neurons	-0.02507	0.009982	0.012017
RNASEH2	HandOA	Dopaminergic neuron	0.079626	0.031237	0.0108	HLA-DM*/HandOA	OPC/COP		0.038405	0.015178	0.011399	FAM182B	HipOA	Inhibitory neurons	0.018155	0.00723	0.012039
MPP3	HipOA	Oligodendrocytes	0.06158	0.024161	0.01081	PTPN13	ThumbOA	Inhibitory neurons	-0.16967	0.067073	0.01142	SPATA20	SpineOA	Astrocytes	-0.05608	0.022337	0.01205
KIAA0930	HipOA	Oligodendrocytes	0.040116	0.015743	0.01083	POL1	HipOA	Oligodendrocytes	-0.07518	0.029736	0.01146	PWWP2A	SpineOA	Dopaminergic neuron	0.059324	0.023631	0.01206
RPN1	KneeOA	Excitatory neurons	-0.0252	0.009893	0.01085	MAP1LC3	KneeOA	Excitatory neurons	-0.0793	0.031377	0.01149	DDX4	FingerOA	Oligodendrocytes	-0.13015	0.051858	0.01208
RPN1	KneeOA	Inhibitory neurons	-0.03264	0.012814	0.01085	LINC0215	KneeOA	Inhibitory neurons	-0.02484	0.009829	0.01151	RUNX2	HipOA	Oligodendrocytes	0.021751	0.008668	0.0121
LINC0126	HandOA	Microglia	0.063499	0.024939	0.01089	LINC0215	KneeOA	Excitatory neurons	-0.02241	0.008867	0.01151	LINC0050	SpineOA	Excitatory neurons	-0.0851	0.033928	0.01213
KCNMA1	KneeOA	Astrocytes	0.056277	0.022102	0.01089	PRDX1	KneeOA	Dopaminergic neur	0.04189	0.01658	0.01155	PLB1	FingerOA	Serotonergic-like neu	-0.05481	0.021851	0.01213
KIAA0513	SpineOA	Dopaminergic neuron	0.035337	0.01388	0.0109	RNASEH2	ThumbOA	Dopaminergic neuron	0.108064	0.042793	0.01156	AF064858	HipOA	Excitatory neurons	-0.11915	0.047562	0.01224
C1GALT1	HipOA	Oligodendrocytes	-0.03146	0.012358	0.0109	CCDC90B	SpineOA	Inhibitory neurons	0.089178	0.035326	0.01159	L2HGDH	ThumbOA	Inhibitory neurons	0.107369	0.042884	0.01229
CAB39L	KneeOA	Astrocytes	-0.0479	0.018822	0.01093	CYB561	ThumbOA	Inhibitory neurons	-0.0399	0.01581	0.01161	THAP7-A	KneeOA	Dopaminergic neur	-0.0335	0.01339	0.01231
GATM	ThumbOA	Serotonergic-like neu	-0.07573	0.029772	0.01097	ZNF880	ThumbOA	OPC/COP	0.077875	0.030856	0.01161	CDK10	ThumbOA	Excitatory neurons	0.148418	0.0593	0.01232
SLC25A1	SpineOA	Serotonergic-like neu	-0.03645	0.014337	0.01101	HLA-DM*/HandOA	Microglia		0.036258	0.014368	0.011622	COP1	SpineOA	Excitatory neurons	-0.16728	0.066842	0.01233
SLC25A1	SpineOA	Dopaminergic neuron	-0.03854	0.01516	0.01101	ZNF880	FingerOA	Astrocytes	0.072767	0.028839	0.01163	UROS	HandOA	Excitatory neurons	0.120441	0.048138	0.01235
KNSTRN	ThumbOA	Inhibitory neurons	0.065789	0.025877	0.01101	NDUFB3	FingerOA	Serotonergic-like neu	-0.16204	0.064227	0.01164	TBCA	HipOA	Oligodendrocytes	-0.04792	0.019157	0.01237
KNSTRN	ThumbOA	Excitatory neurons	0.061852	0.024329	0.01101	C7orf50	KneeOA	Dopaminergic neur	-0.0466	0.0185	0.01169	CNN3	KneeOA	Dopaminergic neur	0.03194	0.01277	0.0124
LEPR	ThumbOA	Astrocytes	-0.08699	0.034225	0.01103	VRK1	KneeOA	Excitatory neurons	0.058904	0.023365	0.0117	PPHLN1	HipOA	Excitatory neurons	0.075914	0.030359	0.0124
DEC2	HandOA	Serotonergic-like neu	0.076298	0.030037	0.01108	ZNF880	ThumbOA	Excitatory neurons	0.064528	0.025602	0.01172	ZNF880	ThumbOA	Inhibitory neurons	0.078387	0.031348	0.0124
ARHGAP2	HipOA	Excitatory neurons	0.04429	0.017438	0.01109	ZNF880	ThumbOA	Oligodendrocytes	0.076028	0.030164	0.01172	ZNF880	ThumbOA	Dopaminergic neuron	0.057013	0.0228	0.0124
LINC0083	SpineOA	Excitatory neurons	-0.03275	0.012896	0.01111	SETD6	KneeOA	Serotonergic-like n	-0.0472	0.01874	0.01179	GRID2IP	HipOA	Excitatory neurons	0.063317	0.025324	0.01241
MAP1LC3	KneeOA	Inhibitory neurons	-0.09231	0.03638	0.01117	OSGEF	FingerOA	Excitatory neurons	-0.18878	0.074962	0.01179	CASP6	SpineOA	Excitatory neurons	0.072458	0.028983	0.01242
HLA-DM*/FingerOA	Oligodendrocytes		0.043796	0.017266	0.011197	HLA-DM*/FingerOA	Microglia		0.047956	0.019048	0.011814	DDX42	FingerOA	Dopaminergic neuron	-0.11718	0.046911	0.01249
OAF	HipOA	Astrocytes	0.080467	0.031725	0.0112	STK32C	KneeOA	Serotonergic-like n	0.0568	0.02257	0.01183	AL034417	ThumbOA	Oligodendrocytes	0.087097	0.034891	0.01255
KNSTRN	ThumbOA	Dopaminergic neuron	0.061243	0.024154	0.01123	WVDE	HandOA	Excitatory neurons	-0.04096	0.016276	0.01184	TMPRSS7	SpineOA	Excitatory neurons	-0.02875	0.011524	0.01259
ITGB3BP	HipOA	Microglia	-0.03782	0.01492	0.01125	ECM2	ThumbOA	Inhibitory neurons	0.123583	0.049102	0.01184	C3orf52	SpineOA	Excitatory neurons	-0.03943	0.015802	0.01259
KYAT3	ThumbOA	Dopaminergic neuron	0.091734	0.036203	0.01128	TRIM47	KneeOA	Dopaminergic neur	-0.0544	0.0216	0.01186	TMPRSS7	SpineOA	Inhibitory neurons	-0.03198	0.012816	0.01259
HLA-DM*/FingerOA	Astrocytes		0.045879	0.01811	0.011297	SEC23B	KneeOA	Excitatory neurons	0.060214	0.02393	0.01186	RAD51C	HipOA	Excitatory neurons	-0.03823	0.015324	0.012616
FAM184B	HipOA	Astrocytes	0.071795	0.028344	0.01131	MDFIC	ThumbOA	Astrocytes	-0.1319	0.052467	0.01194	SYNJ2	FingerOA	Excitatory neurons	0.122363	0.049057	0.01262
RPF2	SpineOA	Dopaminergic neuron	-0.06433	0.021002	0.01133	FAM171A	SpineOA	Excitatory neurons	-0.07208	0.028675	0.01195	MTCH2	HandOA	Dopaminergic neuron	-0.06046	0.024242	0.012633
C20orf194	FingerOA	Oligodendrocytes	-0.17772	0.070179	0.01133	AC011462	HipOA	Excitatory neurons	0.057385	0.022832	0.01196	PCDHA9	KneeOA	Dopaminergic neur	-0.0413	0.01654	0.01265
IPP	HandOA	Excitatory neurons	0.097503	0.038512	0.01135	CFAP95	KneeOA	Serotonergic-like n	0.03142	0.01251	0.01198	EIF2AK3	HipOA	Excitatory neurons	0.066149	0.026541	0.01269
MYO6	FingerOA	Astrocytes	-0.11047	0.04365	0.01138	LLGL1	ThumbOA	Oligodendrocytes	-0.11662	0.046418	0.01199	BTRC	ThumbOA	Astrocytes	0.192086	0.077087	0.01271
MIR4713F	HandOA	Astrocytes	-0.06287	0.025233	0.01272	C20orf194	KneeOA	Astrocytes	-0.05252	0.0212	0.01323	AC087289	ThumbOA	Oligodendrocytes	0.156526	0.063552	0.01378
MIR4713F	HandOA	Inhibitory neurons	-0.05649	0.022674	0.01272	AP3S2	ThumbOA	Serotonergic-like neu	0.178352	0.072004	0.01325	AKAP11	ThumbOA	Excitatory neurons	0.188425	0.076528	0.01381
CC21B	ThumbOA	Excitatory neurons	-0.11114	0.044622	0.01275	MCC22	FingerOA	Excitatory neurons	-0.20674	0.083474	0.01326	ZNF738	ThumbOA	Excitatory neurons	-0.1072	0.043542	0.01382
NDUFB3	ThumbOA	Dopaminergic neuron	-0.10508	0.042194	0.01276	CDC42	HandOA	Serotonergic-like neu	-0.05574	0.022507	0.01326	RNASEH2	SpineOA	Dopaminergic neuron	0.064047	0.026018	0.01383
LINC0169	KneeOA	Oligodendrocytes	-0.04696	0.018858	0.01277	TP53INP1	HipOA	Microglia	-0.06031	0.024353	0.01327	SHMT1	HipOA	OPC/COP	0.061927	0.025516	0.01384
PLSCR4	FingerOA	Endothelial cells	-0.11617	0.046661	0.01279	TMEM116	KneeOA	Serotonergic-like n	0.05427	0.02192	0.01328	TRAPPC1	KneeOA	Oligodendrocytes	-0.06302	0.025617	0.01389
CLOCK	KneeOA	OPC/COP	0.042154	0.016934	0.0128	NBEAP2	ThumbOA	Serotonergic-like neu	0.10995	0.044403	0.01328	LINC0150	HandOA	Microglia	0.049598	0.020161	0.01389
PHKB	KneeOA	Astrocytes	0.054308	0.021821	0.01282	TRIM2	HipOA	Oligodendrocytes	0.062556	0.025269	0.0133	HMGN1	KneeOA	Serotonergic-like n	0.05924	0.02409	0.01392
USP14	HandOA	Oligodendrocytes	-0.08753	0.035173	0.01283	HLA-C	FingerOA	Microglia	0.156071	0.063043	0.0133	SAR1A	HandOA	Dopaminergic neuron	0.070995	0.028874	0.01394
FAM86C1	HipOA	Serotonergic-like neu	0.041675	0.016749	0.01284	MASTL	KneeOA	Oligodendrocytes	-0.03275	0.013231	0.01332	HLA-DQB	ThumbOA	Endothelial cells	0.060295	0.024527	0.01396
TMC03	SpineOA	Oligodendrocytes	0.094961	0.038165	0.01284	NMRAL1	HipOA	Oligodendrocytes	-0.07207	0.029118	0.01332	RBAK-RB	HandOA	Dopaminergic neuron	0.06368	0.025907	0.01397
GATM	ThumbOA	Oligodendrocytes	-0.0795	0.031952	0.01284	ABCC5	HipOA	Serotonergic-like neu	0.059595	0.024078	0.01332	POLR2L	FingerOA	Dopaminergic neuron	-0.12335	0.0502	0.014
LAP3	HipOA	Astrocytes	0.052245	0.021	0.01285	TMEM97	KneeOA	Dopaminergic neur	-0.0413	0.01671	0.01334	ATP6AP11	SpineOA	Serotonergic-like neu	-0.06132	0.024976	0.01408
ZNF649	HandOA	Oligodendrocytes	-0.08342	0.033529	0.01285	PDGFC	HipOA	Serotonergic-like neu	-0.08217	0.033231	0.01335	ADAMTS1	FingerOA	Oligodendrocytes	-0.13207	0.053808	0.01411
ZNF577	HandOA	Oligodendrocytes	-0.07548	0.030337	0.01285	ZNF814	ThumbOA	Serotonergic-like neu	0.094978	0.038386	0.01335	GRHL2	KneeOA	Serotonergic-like n	-0.04	0.01632	0.01415
COPB2	SpineOA	Oligodendrocytes	0.08167	0.032827	0.01285	BMP4	KneeOA	Serotonergic-like n	0.03137	0.01269	0.0134	PLEKHA1	KneeOA	Oligodendrocytes	-0.05647	0.023025	0.01418
RBP1	SpineOA	Dopaminergic neuron	0.069917	0.028103	0.01285	TCTN3	KneeOA	Serotonergic-like n	0.06335	0.02562	0.01342	ATP6V0A	KneeOA	Excitatory neurons	0.064454	0.02629	0.01422
SNAP29	HandOA	Dopaminergic neuron	-0.07523	0.030254	0.0129	HS2ST1	KneeOA	Serotonergic-like n	-0.0931	0.03764	0.01343	TPRKB	KneeOA	Dopaminergic neur	-0.095	0.03877	0.01424
AC092902	HipOA	OPC/COP	-0.04161	0.016739	0.01292	SPIRE2	KneeOA	Astrocytes	-0.04259	0.017235	0.01347	MKS5	ThumbOA	Excitatory neurons	-0.17359	0.070825	0.01425
SPATA6L	ThumbOA	Astrocytes	0.083734	0.033694	0.01295	C12orf60	FingerOA	Oligodendrocytes	-0.07667	0.031032	0.01348	PLK5	HandOA	Excitatory neurons	-0.09953	0.040613	0.01426
MYO15A	KneeOA	Inhibitory neurons	0.046434	0.018685	0.01295	ADNP	KneeOA	Serotonergic-like n	-0.0534	0.02161	0.01352	LSM6	KneeOA	Inhibitory neurons	0.047749	0.019488	0.01428
RNF8	HandOA	Dopaminergic neuron	-0.12415	0.049957	0.01295	C17orf100	ThumbOA	OPC/COP	-0.09919	0.040165	0.01353	AL450332	HipOA	Astrocytes	-0.05162	0.021071	0.0143
FUT2	KneeOA	Excitatory neurons	0.04759	0.019152	0.01296	ZNF880	HandOA	OPC/COP	0.055495	0.022484	0.01358	RAD51C	HipOA	Inhibitory neurons	-0.03754	0.015327	0.014315
PSMC3	FingerOA	Dopaminergic neuron	-0.17282	0.069547	0.01296	LLGL1	SpineOA	Oligodendrocytes	-0.06447	0.026133	0.01362	UROS	HandOA	Serotonergic-like neu	0.062925	0.025698	0.01434
MORC3	SpineOA	Excitatory neurons	-0.06298	0.025349	0.01297	TPM2	KneeOA	Inhibitory neurons	-0.02967	0.012036	0.01369	UROS	HandOA	Dopaminergic neuron	0.068465	0.027961	0.01434
AL049775	SpineOA	Excitatory neurons	-0.06725	0.027069	0.01298	GLTP	HipOA	Oligodendrocytes	-0.05519	0.022387	0.01369	TMEM17	KneeOA	Dopaminergic neur	-0.0406	0.0166	0.01434
PACRG	KneeOA	OPC/COP	-0.02747	0.011059	0.013	KLHDC4	ThumbOA	Endothelial cells	0.061635	0.025001	0.01369	FLOT1	HipOA	Inhibitory neurons	0.061319	0.025043	0.014341
AC104964	HipOA	Inhibitory neurons	0.051714	0.020825	0.01302	KLHDC4	ThumbOA	OPC/COP	0.047842	0.019406	0.01369	MDFC	HandOA	Astrocytes	-0.09377	0.038313	0.01439
SHMT1	SpineOA	OPC/COP	0.072622	0.029251	0.01304	MAB21L4	SpineOA	Serotonergic-like neu	0.041642	0.016893	0.0137	ANAPC4	HipOA	Oligodendrocytes	0.085024	0.034745	0.0144
HLA-DM*/HandOA	Astrocytes		0.034344	0.013837	0.013065	SH2D3C	HipOA	Microglia	-0.05439	0.022068	0.01371	HLA-DRB	ThumbOA	Dopaminergic neuron	-0.02746	0.011225	0.014415
AC003005	ThumbOA	Inhibitory neurons	-0.09815	0.039546	0.01307	MRPS27	HandOA	Excitatory neurons	0.082705	0.033555	0.01371	GOLGA6L	SpineOA	Astrocytes	-0.03822	0.015621	0.014428
ZNF429	ThumbOA	Oligodendrocytes	0.057362	0.023136	0.01316	ZSCAN18	HandOA	Oligodendrocytes	-0.1002	0.04067	0.01375	RPS6KA5	ThumbOA	O			

PRKD3	FingerOA	Serotonergic-like neu	-0.1165	0.047626	0.01444	SPECC1	KneeOA	Dopaminergic neur	0.05169	0.02125	0.01499	CEP164	ThumbOA	Oligodendrocytes	-0.12281	0.050718	0.01546
PNPLA2	KneeOA	Excitatory neurons	-0.064	0.026165	0.01445	HLA-DQB	KneeOA	Microglia	-0.02585	0.010631	0.01503	KCNK1	SpineOA	Oligodendrocytes	0.039392	0.01627	0.01547
NME1	FingerOA	Serotonergic-like neu	0.108269	0.04428	0.01448	NOB1	HipOA	Excitatory neurons	0.059525	0.024482	0.01504	ABHD12	SpineOA	Oligodendrocytes	0.074589	0.03081	0.01548
AC104964	HipOA	Excitatory neurons	0.052563	0.021499	0.01449	USP37	HandOA	Oligodendrocytes	0.073468	0.030225	0.01507	TMEM230	ThumbOA	Serotonergic-like neu	-0.10584	0.043728	0.0155
ALDH9A1	HandOA	Serotonergic-like neu	-0.05476	0.0224	0.01445	VSIG10	HipOA	Excitatory neurons	-0.06376	0.026231	0.01507	C11orf54	HipOA	Serotonergic-like neu	0.042459	0.017547	0.01553
TRIM23	KneeOA	Serotonergic-like n	0.03519	0.0144	0.01454	LSM6	KneeOA	Excitatory neurons	0.05561	0.02288	0.01508	LINC0174	KneeOA	Oligodendrocytes	-0.02454	0.010143	0.01554
TRIM23	KneeOA	Dopaminergic neur	0.02271	0.00929	0.01454	LSM6	KneeOA	Dopaminergic neur	0.03933	0.01618	0.01508	CPNE1	HipOA	Serotonergic-like neu	0.020355	0.008414	0.01556
OSGEP	FingerOA	Inhibitory neurons	-0.14947	0.06118	0.01456	PDE4D	HandOA	OPC/COP	-0.08195	0.033722	0.01509	KNOP1	HandOA	Astrocytes	-0.03629	0.015003	0.01557
NDUFAF1	FingerOA	Serotonergic-like neu	-0.12821	0.052477	0.01456	ATG7	KneeOA	Astrocytes	0.047842	0.019694	0.01513	CD151	FingerOA	Astrocytes	0.110567	0.045728	0.01561
FASTKD1	KneeOA	Astrocytes	0.06901	0.028249	0.01457	GAL3ST2	HipOA	Astrocytes	0.032536	0.013399	0.01517	SERTAD4	HipOA	Dopaminergic neur	0.054269	0.022449	0.01563
RPN1	KneeOA	OPC/COP	-0.03637	0.014886	0.01457	LINC0066	HipOA	Excitatory neurons	-0.04037	0.016627	0.01518	ZNF124	KneeOA	Astrocytes	0.044437	0.018385	0.01565
PNPLA2	ThumbOA	Excitatory neurons	-0.15398	0.063078	0.01464	DIS3L2	HipOA	Oligodendrocytes	0.043091	0.017749	0.01519	ZNF124	KneeOA	Microglia	0.050689	0.020972	0.01565
TMEM161	SpineOA	Serotonergic-like neu	0.076028	0.031154	0.01467	GP2	SpineOA	Serotonergic-like neu	0.08048	0.033159	0.01522	STARDB7	HandOA	Oligodendrocytes	-0.12199	0.05049	0.01569
PDPK1	FingerOA	Astrocytes	-0.10226	0.041906	0.01468	MRPS14	SpineOA	Dopaminergic neur	-0.04423	0.018225	0.015237	HSD17B4	KneeOA	Excitatory neurons	0.051711	0.021403	0.01569
PDPK1	FingerOA	Inhibitory neurons	-0.11194	0.045872	0.01468	IL20RA	SpineOA	OPC/COP	-0.05819	0.023979	0.01524	AGMO	FingerOA	Serotonergic-like neu	-0.08622	0.035688	0.0157
MCCC2	FingerOA	Oligodendrocytes	-0.10038	0.041141	0.01469	LTF	ThumbOA	Astrocytes	0.081496	0.033591	0.01526	FASTKD1	KneeOA	Oligodendrocytes	0.051326	0.021264	0.01579
FAM45A	SpineOA	Excitatory neurons	0.098336	0.040307	0.0147	AC008667	ThumbOA	Oligodendrocytes	0.146966	0.0606	0.0153	FAM45A	SpineOA	Oligodendrocytes	0.102584	0.042508	0.01581
AQR	KneeOA	Excitatory neurons	0.0431	0.017666	0.0147	TBCA	SpineOA	Oligodendrocytes	-0.05241	0.021614	0.01532	TRAF3IP	KneeOA	Dopaminergic neur	0.05035	0.02087	0.01584
PSORS1C	HipOA	Oligodendrocytes	-0.03071	0.012596	0.014752	PRH1	HipOA	Oligodendrocytes	-0.06691	0.027594	0.01532	LTF	HandOA	Astrocytes	0.059252	0.024571	0.01589
FMO4	KneeOA	Endothelial cells	0.032563	0.013359	0.01479	ZNF880	HandOA	Excitatory neurons	0.04523	0.018655	0.01533	TECPR2	HandOA	Oligodendrocytes	0.110572	0.045858	0.0159
AC007405	HipOA	Oligodendrocytes	-0.04686	0.019228	0.0148	ZNF880	HandOA	Oligodendrocytes	0.053291	0.02198	0.01533	SRR	KneeOA	Excitatory neurons	0.042988	0.01783	0.01591
ERIC2	HipOA	Oligodendrocytes	-0.04343	0.017819	0.0148	MEOX2	FingerOA	Serotonergic-like neu	-0.0806	0.033249	0.01534	SRR	KneeOA	Inhibitory neurons	0.043259	0.017942	0.01591
RPA2	KneeOA	Serotonergic-like n	-0.0291	0.01194	0.01484	MRPL48	ThumbOA	Excitatory neurons	0.086222	0.035567	0.01534	SRR	KneeOA	Dopaminergic neur	0.02048	0.00849	0.01591
AC092902	FingerOA	OPC/COP	-0.07845	0.032209	0.01487	AC016747	HipOA	Excitatory neurons	-0.0817	0.033711	0.01537	RCBTB1	KneeOA	Oligodendrocytes	-0.02255	0.009353	0.01592
PIGP	HandOA	Dopaminergic neur	-0.05428	0.022293	0.01489	HLA-F	ThumbOA	Excitatory neurons	-0.10898	0.044972	0.01538	LAMA2	KneeOA	Oligodendrocytes	0.033848	0.014041	0.01592
COG1	SpineOA	Inhibitory neurons	-0.09892	0.040631	0.01491	AL596442	ThumbOA	Endothelial cells	-0.06342	0.026174	0.01539	BTRC	HandOA	Astrocytes	0.14062	0.058336	0.01593
CDC42	KneeOA	Serotonergic-like n	-0.0324	0.01332	0.01491	ADD3	HandOA	Excitatory neurons	-0.11704	0.048304	0.01539	IGHMBP2	HipOA	Oligodendrocytes	0.037596	0.015597	0.01593
CD151	ThumbOA	Serotonergic-like neu	0.128357	0.052728	0.01492	ATP5MC2	SpineOA	Oligodendrocytes	-0.12703	0.052431	0.0154	VAMP4	ThumbOA	Dopaminergic neur	-0.07796	0.03235	0.01595
KRTCAP3	HipOA	Excitatory neurons	0.058643	0.024095	0.01494	MIAT	HipOA	OPC/COP	-0.02879	0.011886	0.01544	SPATA6L	ThumbOA	Excitatory neurons	-0.12459	0.051703	0.01596
DEC2R	HandOA	Dopaminergic neur	0.061221	0.025159	0.01496	C20orf194	FingerOA	Astrocytes	-0.1278	0.052769	0.01544	ARL3	HipOA	Serotonergic-like neu	0.05351	0.022207	0.01597
SIDT2	KneeOA	Serotonergic-like n	-0.0491	0.02019	0.01497	NAAA	FingerOA	Dopaminergic neur	-0.10281	0.042455	0.01545	ARL3	HipOA	Dopaminergic neur	0.045126	0.018728	0.01597
ANAPC4	HandOA	Excitatory neurons	0.121253	0.04984	0.01498	ZP3	FingerOA	Dopaminergic neur	-0.039	0.016105	0.01545	CAPN9	ThumbOA	Oligodendrocytes	0.109308	0.045368	0.01598

BNIP3	ThumbOA	Dopaminergic neur	-0.19981	0.082955	0.01601
VCPKMT	HandOA	Dopaminergic neur	-0.0842	0.034986	0.0161
SYNRG	KneeOA	Oligodendrocytes	-0.03628	0.01508	0.01614
NRG4	KneeOA	Excitatory neurons	0.022668	0.009425	0.01617
NRG4	KneeOA	Inhibitory neurons	0.030564	0.012708	0.01617
SLC3A8	FingerOA	Excitatory neurons	-0.08608	0.035813	0.01623
OTUD7A	SpineOA	Oligodendrocytes	0.026185	0.010898	0.01627
PBX3	HipOA	Excitatory neurons	0.072787	0.030301	0.0163
MRPL35	HandOA	Serotonergic-like neu	0.060737	0.025285	0.0163
AP001505	HandOA	Excitatory neurons	0.078871	0.032834	0.0163
FAM221A	FingerOA	Serotonergic-like neu	0.126618	0.052721	0.01632
ZSCAN18	KneeOA	Oligodendrocytes	-0.05527	0.023018	0.01635
RBAK-RB	FingerOA	Dopaminergic neur	0.088238	0.036754	0.01636
ASPN	FingerOA	Astrocytes	0.11214	0.046723	0.01639
HIBADH	KneeOA	Oligodendrocytes	-0.0248	0.010337	0.01641
ZNF559-Z	SpineOA	Astrocytes	-0.05883	0.024521	0.01643
ZNF559-Z	SpineOA	Excitatory neurons	-0.05201	0.021679	0.01643
ZNF559-Z	SpineOA	Inhibitory neurons	-0.06247	0.026037	0.01643
ZNF559-Z	SpineOA	Oligodendrocytes	-0.0513	0.021381	0.01643
HLA-DM/	ThumbOA	Endothelial cells	0.060015	0.025019	0.01645
HLA-DM/	ThumbOA	Inhibitory neurons	0.054858	0.022869	0.01645
EFHB	HipOA	Astrocytes	0.026903	0.011218	0.01648
EFHB	HipOA	Excitatory neurons	0.025265	0.010536	0.01648
EFHB	HipOA	Inhibitory neurons	0.027145	0.011319	0.01648
EFHB	HipOA	Oligodendrocytes	0.022371	0.009329	0.01648
EFHB	HipOA	OPC/COP	0.027831	0.011605	0.01648
EFHB	HipOA	Serotonergic-like neu	0.039851	0.016618	0.01648
EFHB	HipOA	Dopaminergic neur	0.047745	0.010991	0.01648
GSTM5	KneeOA	Astrocytes	-0.02303	0.009604	0.0165
GSTM5	KneeOA	OPC/COP	-0.03351	0.013975	0.0165
SNRNP25	HandOA	Serotonergic-like neu	-0.06209	0.025905	0.01654
CDIP1	HipOA	Astrocytes	-0.04158	0.017361	0.01661

SRR	HipOA	Excitatory neurons	-0.05439	0.022707	0.01661
SRR	HipOA	Inhibitory neurons	-0.05473	0.02285	0.01661
SRR	HipOA	Dopaminergic neur	-0.02591	0.010818	0.01661
PSMB5	FingerOA	Dopaminergic neur	0.121968	0.050945	0.01666
AP001273	HipOA	Oligodendrocytes	0.034431	0.014383	0.01667
KNOP1	HandOA	Excitatory neurons	-0.04917	0.020547	0.0167
KNOP1	HandOA	Serotonergic-like neu	-0.04688	0.0119591	0.0167
IGHMBP2	HipOA	Excitatory neurons	0.050775	0.021218	0.01671
RNF8	HandOA	Astrocytes	-0.05899	0.024653	0.01672
RNF8	HandOA	Excitatory neurons	-0.06741	0.02817	0.01672
CIQTNF4	HipOA	Dopaminergic neur	-0.13951	0.058315	0.01674
MAN2C1	KneeOA	Microglia	-0.03725	0.015573	0.01676
STAP2	FingerOA	Serotonergic-like neu	0.059437	0.024849	0.01676
IQANK1	HandOA	Excitatory neurons	-0.08026	0.033559	0.01678
STMP1	HipOA	Dopaminergic neur	0.051894	0.021706	0.01681
CPNE1	KneeOA	Excitatory neurons	0.070461	0.029471	0.01681
VAMP4	ThumbOA	Serotonergic-like neu	-0.06418	0.026853	0.01685
ASTN2	KneeOA	Astrocytes	-0.05708	0.023892	0.01689
AC124319	KneeOA	Oligodendrocytes	0.025648	0.010735	0.01689
FEZ2	HipOA	Excitatory neurons	-0.06321	0.026457	0.01689
NARS2	ThumbOA	Inhibitory neurons	0.094261	0.03948	0.01696
SMIM19	SpineOA	Dopaminergic neur	-0.09799	0.041049	0.01698
PACRG	KneeOA	Astrocytes	-0.04627	0.019385	0.01699
PACRG	KneeOA	Excitatory neurons	-0.04885	0.020467	0.01699
WWOX	HipOA	Excitatory neurons	0.062887	0.026356	0.01703
SLC16A3	ThumbOA	Dopaminergic neur	-0.26604	0.111548	0.01708
EXOC3	KneeOA	Serotonergic-like n	-0.0416	0.017143	0.01709
CFLAR	FingerOA	Serotonergic-like neu	-0.1123	0.047102	0.01712
FAM19A2	HandOA	OPC/COP	-0.04969	0.020844	0.01713
MAPT	KneeOA	Astrocytes	-0.02624	0.011006	0.017139
CTSF	KneeOA	Serotonergic-like n	-0.0265	0.01113	0.01714
CTSF	KneeOA	Dopaminergic neur	-0.0347	0.01457	0.01714

CEP164	ThumbOA	Oligodendrocytes	-0.12281	0.050718	0.01546
KCNK1	SpineOA	Oligodendrocytes	0.039392	0.01627	0.01547
ABHD12	SpineOA	Oligodendrocytes	0.074589	0.03081	0.01548
TMEM230	ThumbOA	Serotonergic-like neu	-0.10584	0.043728	0.0155
C11orf54	HipOA	Serotonergic-like neu	0.042459	0.017547	0.01553
LINC0174	KneeOA	Oligodendrocytes	-0.02454	0.010143	0.01554
CPNE1	HipOA	Serotonergic-like neu	0.020355	0.008414	0.01556
KNOP1	HandOA	Astrocytes	-0.03629	0.015003	0.01557
CD151	FingerOA	Astrocytes	0.110567	0.045728	0.01561
SERTAD4	HipOA	Dopaminergic neur	0.054269	0.022449	0.01563
ZNF124	KneeOA	Astrocytes	0.044437	0.018385	0.01565
ZNF124	KneeOA	Microglia	0.050689	0.020972	0.01565
STARDB7	HandOA	Oligodendrocytes	-0.12199	0.05049	0.01569
HSD17B4	KneeOA	Excitatory neurons	0.051711	0.021403	0.01569
AGMO	FingerOA	Serotonergic-like neu	-0.08622	0.035688	0.0157
FASTKD1	KneeOA	Oligodendrocytes	0.051326	0.021264	0.01579
FAM45A	SpineOA	Oligodendrocytes	0.102584	0.042508	0.01581
TRAF3IP	KneeOA	Dopaminergic neur	0.05035	0.02087	0.01584
LTF	HandOA	Astrocytes	0.059252	0.024571	0.01589
TECPR2	HandOA	Oligodendrocytes	0.110572	0.045858	0.0159
SRR	KneeOA	Excitatory neurons	0.042988	0.01783	0.01591
SRR	KneeOA	Inhibitory neurons	0.043259	0.017942	0.01591
SRR	KneeOA	Dopaminergic neur	0.02048	0.00849	0.01591
RCBTB1	KneeOA	Oligodendrocytes	-0.02255	0.009353	0.01592
LAMA2	KneeOA	Oligodendrocytes	0.033848	0.014041	0.01592
BTRC	HandOA	Astrocytes	0.14062	0.058336	0.01593
IGHMBP2	HipOA	Oligodendrocytes	0.037596	0.015597	0.01593
VAMP4	ThumbOA	Dopaminergic neur	-0.07796	0.03235	0.0

TPM2	SpineOA	Astrocytes	-0.04699	0.019826	0.01778	NMRK1	SpineOA	Microglia	0.042338	0.017976	0.01851	CCDC88B	FingerOA	Astrocytes	0.112242	0.04785	0.01899
TPM2	SpineOA	Excitatory neurons	-0.04645	0.019597	0.01778	SLC9C2	SpineOA	Excitatory neurons	-0.0626	0.026583	0.01852	INTU	HipOA	Serotonergic-like neu	0.045497	0.019399	0.019009
EMILIN2	KneeOA	OPC/COP	-0.04201	0.017738	0.01788	COLGAL1	HipOA	Oligodendrocytes	0.066142	0.028085	0.01852	ECM2	HandOA	Inhibitory neurons	0.084176	0.035894	0.01902
IMMT	HandOA	Excitatory neurons	-0.06616	0.027938	0.01788	KNOP1	HandOA	Inhibitory neurons	-0.06509	0.027462	0.01854	ENTPD6	SpineOA	Serotonergic-like neu	0.089707	0.038259	0.01904
RNF8	FingerOA	Dopaminergic neuron	-0.13995	0.059115	0.01791	KNOP1	HandOA	OPC/COP	-0.05679	0.02412	0.01854	CHGA	HipOA	Dopaminergic neuron	-0.11731	0.050038	0.01906
KYAT3	HandOA	Dopaminergic neuron	0.062754	0.026509	0.01792	MXD3	KneeOA	Astrocytes	-0.0457	0.019412	0.01856	ANKRD7	ThumbOA	Oligodendrocytes	0.061777	0.026354	0.01907
USP47	FingerOA	Excitatory neurons	0.162964	0.068852	0.01794	PSMC3	HandOA	Dopaminergic neuron	-0.1202	0.051058	0.01856	AC004076	ThumbOA	Astrocytes	0.094673	0.040393	0.01909
C11orf80	KneeOA	Dopaminergic neuron	-0.0482	0.02037	0.01795	FLT01	ThumbOA	Inhibitory neurons	0.109794	0.046638	0.018563	IQCB1	HipOA	Microglia	0.039204	0.016745	0.01922
TRAF1	HipOA	Oligodendrocytes	0.047547	0.020091	0.01795	NBPF26	HipOA	Inhibitory neurons	-0.05702	0.024226	0.01859	MAPK13	ThumbOA	Serotonergic-like neu	-0.12092	0.051664	0.01926
CD300LF	KneeOA	Microglia	0.052166	0.022048	0.01798	DAAM2	FingerOA	Oligodendrocytes	-0.1485	0.063099	0.0186	ITIH2	HipOA	Excitatory neurons	-0.06893	0.029475	0.01936
AP006621	FingerOA	Oligodendrocytes	0.095688	0.040442	0.01798	MAN2C1	FingerOA	Microglia	-0.09731	0.041367	0.01866	CD46	ThumbOA	Oligodendrocytes	-0.0813	0.034777	0.0194
SNAP29	FingerOA	Dopaminergic neuron	-0.0873	0.036907	0.01801	TPM2	SpineOA	Inhibitory neurons	-0.04013	0.017061	0.01868	EIF4E2	SpineOA	Oligodendrocytes	-0.04983	0.021319	0.01943
C11orf54	HipOA	Dopaminergic neuron	0.046535	0.019685	0.01808	POLR2L	FingerOA	Serotonergic-like neu	-0.18548	0.078884	0.01871	KLHL18	FingerOA	Serotonergic-like neu	0.096529	0.041305	0.01944
NDUFB3	FingerOA	Dopaminergic neuron	-0.10654	0.045071	0.01809	LINC0092	KneeOA	Excitatory neurons	0.039963	0.016999	0.01873	NARS2	ThumbOA	Excitatory neurons	0.078377	0.03354	0.01945
NINL	SpineOA	Oligodendrocytes	-0.05423	0.022947	0.01812	TNFRSF21	HandOA	Excitatory neurons	0.11765	0.050058	0.01876	NARS2	ThumbOA	Oligodendrocytes	0.085286	0.036497	0.01945
PLEKHH3	SpineOA	Astrocytes	0.060143	0.02545	0.01812	NARS2	ThumbOA	Dopaminergic neuron	0.08912	0.037922	0.01877	KANSL1	HandOA	Dopaminergic neuron	0.057268	0.024512	0.019473
RNF103-C	KneeOA	Excitatory neurons	-0.05247	0.022208	0.01814	SPATA20	HipOA	Astrocytes	-0.04656	0.019813	0.01878	CCDC88B	FingerOA	Excitatory neurons	0.073987	0.03167	0.01948
TNFRSF21	FingerOA	Excitatory neurons	0.173085	0.073275	0.01817	PLCB3	SpineOA	Excitatory neurons	0.062534	0.026614	0.01879	IGHMBP2	HipOA	Endothelial cells	0.042564	0.018219	0.01948
AC010422	FingerOA	Oligodendrocytes	0.112834	0.04778	0.0182	EMC9	SpineOA	Serotonergic-like neu	0.070036	0.029809	0.0188	PLEKHG5	ThumbOA	Excitatory neurons	0.115855	0.049599	0.0195
STARD7	FingerOA	Oligodendrocytes	-0.17242	0.07303	0.01823	CEP128	KneeOA	Oligodendrocytes	-0.04001	0.017034	0.01882	PDPK1	FingerOA	Excitatory neurons	-0.10483	0.044882	0.01951
CFAP100	ThumbOA	Excitatory neurons	0.120568	0.051099	0.0183	RNASEH2	SpineOA	Serotonergic-like neu	0.055602	0.023674	0.01884	AC007405	SpineOA	Astrocytes	-0.04187	0.017925	0.01951
RPL7L1	SpineOA	Dopaminergic neuron	-0.07978	0.03382	0.01832	PABPC1L	HipOA	OPC/COP	-0.04488	0.019116	0.01889	TDRD6	KneeOA	Excitatory neurons	0.034836	0.014916	0.01952
POLR2L	HandOA	Dopaminergic neuron	-0.08121	0.034626	0.01833	PCOTH	SpineOA	Serotonergic-like neu	0.069009	0.029394	0.01889	SLC25A27	KneeOA	Excitatory neurons	-0.04234	0.01813	0.01952
AC005332	ThumbOA	Excitatory neurons	0.108953	0.046208	0.01838	NINJ1	HipOA	Dopaminergic neuron	-0.03906	0.016639	0.0189	SLC25A27	KneeOA	Inhibitory neurons	-0.05105	0.021859	0.01952
MRPL21	HipOA	Serotonergic-like neu	-0.03162	0.013411	0.0184	RPRD2	HipOA	Serotonergic-like neu	0.098029	0.041762	0.01891	TDRD6	KneeOA	OPC/COP	0.036778	0.015748	0.01952
TPM2	ThumbOA	Astrocytes	0.076114	0.032289	0.01841	RPRD2	HipOA	Dopaminergic neuron	0.080148	0.034145	0.01891	SLC25A2	KneeOA	Dopaminergic neuron	-0.0211	0.00903	0.01952
TPM2	ThumbOA	Excitatory neurons	0.075237	0.031917	0.01841	RAPGEF3	KneeOA	Oligodendrocytes	0.029904	0.012741	0.01892	FXYD4	HandOA	Serotonergic-like neu	-0.04005	0.01715	0.01952
UBE2L3	ThumbOA	Serotonergic-like neu	-0.15873	0.067342	0.01842	BACE2	KneeOA	Endothelial cells	-0.04537	0.019332	0.01894	MPP3	KneeOA	Oligodendrocytes	0.045787	0.019612	0.01956
SLCO1A2	SpineOA	Oligodendrocytes	-0.06874	0.02917	0.01845	BACE2	KneeOA	Serotonergic-like n	-0.0314	0.01339	0.01894	NOB1	ThumbOA	Excitatory neurons	0.106617	0.045666	0.01956
VKORC1	FingerOA	Serotonergic-like neu	-0.15796	0.067045	0.01847	NDUFAF	KneeOA	Serotonergic-like n	0.04286	0.01826	0.01894	RRP1B	SpineOA	Microglia	-0.05092	0.021815	0.0196
NMRK1	SpineOA	Excitatory neurons	0.037245	0.015813	0.01851	SUCLA2	KneeOA	Serotonergic-like n	0.05803	0.02473	0.01895	KCNH5	HipOA	OPC/COP	0.050397	0.021598	0.01963
NMRK1	SpineOA	Inhibitory neurons	0.035019	0.014869	0.01851	SFTPD	FingerOA	Astrocytes	-0.08278	0.035287	0.01898	CD46	ThumbOA	OPC/COP	-0.08775	0.037621	0.01967
APOBEC3	SpineOA	Serotonergic-like neu	-0.05893	0.025269	0.0197	MAP3K20	SpineOA	Microglia	0.061766	0.026598	0.02022	MESD	FingerOA	Serotonergic-like neu	0.11305	0.048975	0.02098
MKKS	HandOA	Excitatory neurons	-0.12231	0.052544	0.01971	KNOP1	KneeOA	Excitatory neurons	-0.02711	0.011677	0.02024	PABPC1L	HandOA	OPC/COP	-0.05928	0.025684	0.021
VAMP4	ThumbOA	Oligodendrocytes	-0.12946	0.05552	0.01971	KNOP1	KneeOA	Serotonergic-like n	-0.0259	0.01113	0.02024	RBL2	HipOA	Excitatory neurons	0.069393	0.030069	0.02101
GLS	HipOA	Oligodendrocytes	0.07561	0.032428	0.01972	ATG7	HandOA	Oligodendrocytes	0.063659	0.027421	0.02026	EI24	HipOA	Serotonergic-like neu	0.056016	0.024272	0.02101
PIK3R3	SpineOA	Serotonergic-like neu	0.052025	0.022315	0.01973	TELO2	KneeOA	Excitatory neurons	0.043464	0.018722	0.02026	IGFBP7	FingerOA	Astrocytes	-0.06712	0.029089	0.02104
CAB39L	SpineOA	Astrocytes	-0.06246	0.026791	0.01974	RMDN1	ThumbOA	Excitatory neurons	-0.13554	0.0584	0.02029	NME1	HandOA	Serotonergic-like neu	0.070772	0.030681	0.02107
AC093151	SpineOA	Inhibitory neurons	0.039094	0.016771	0.01975	P4HA3	SpineOA	Dopaminergic neuron	0.035419	0.01526	0.02029	GALNT10	ThumbOA	Dopaminergic neuron	-0.05589	0.024235	0.02111
PPP1R15A	SpineOA	Serotonergic-like neu	-0.07303	0.031329	0.01975	TTC28	HandOA	Excitatory neurons	-0.16548	0.071329	0.02034	SPRYD4	KneeOA	Serotonergic-like n	-0.0422	0.01831	0.02115
SNHG7	SpineOA	Serotonergic-like neu	-0.02662	0.01142	0.01976	SYCE3	SpineOA	Dopaminergic neuron	-0.09532	0.041097	0.02037	PIGZ	ThumbOA	Astrocytes	-0.07419	0.032189	0.02118
SNHG7	SpineOA	Dopaminergic neuron	-0.02725	0.011169	0.01976	RGS14	KneeOA	Serotonergic-like n	-0.0213	0.00917	0.02039	PIGZ	ThumbOA	Excitatory neurons	-0.15731	0.068252	0.02118
LLGL1	ThumbOA	Astrocytes	-0.1256	0.053898	0.01979	RGS14	KneeOA	Dopaminergic neuron	-0.0206	0.00887	0.02039	CCDC25	HandOA	Dopaminergic neuron	-0.0557	0.024172	0.02121
GNB2	HandOA	Serotonergic-like neu	-0.16304	0.069977	0.01981	RGS14	KneeOA	Excitatory neurons	-0.05437	0.023445	0.02039	HLA-DM	KneeOA	Excitatory neurons	0.033971	0.014744	0.021221
NME5	SpineOA	Dopaminergic neuron	0.053384	0.022914	0.01982	QPR1	KneeOA	Dopaminergic neuron	0.05253	0.02266	0.02042	IGHMBP2	HipOA	Microglia	0.042514	0.018456	0.02125
GSTO2	ThumbOA	Oligodendrocytes	0.085754	0.036811	0.01983	SCMH1	KneeOA	Oligodendrocytes	0.043108	0.018597	0.02045	PHYHD1	FingerOA	Oligodendrocytes	0.089117	0.038696	0.02128
PDHX	HandOA	Astrocytes	-0.07966	0.034196	0.01983	GNL3	KneeOA	Dopaminergic neuron	-0.0441	0.01903	0.02051	IQCB1	HipOA	Astrocytes	0.037035	0.016085	0.02131
ECM2	ThumbOA	Excitatory neurons	0.10497	0.045064	0.01984	LLGL1	SpineOA	Astrocytes	-0.06916	0.029859	0.02054	IQCB1	HipOA	Inhibitory neurons	0.053524	0.023247	0.02131
PDHX	ThumbOA	Astrocytes	-0.11028	0.04735	0.01986	USP31	KneeOA	Oligodendrocytes	-0.07737	0.033415	0.02059	FMC1	KneeOA	Dopaminergic neuron	-0.0503	0.02185	0.02134
LINC0126	ThumbOA	Microglia	0.078676	0.033792	0.0199	CSGALN	FingerOA	OPC/COP	0.081747	0.035322	0.02065	KRII1	ThumbOA	Excitatory neurons	0.138431	0.060137	0.02134
AIMP1	KneeOA	Serotonergic-like n	-0.0483	0.02074	0.01995	GAL3ST2	HipOA	Oligodendrocytes	0.044314	0.019158	0.02072	IGSF22	SpineOA	Serotonergic-like neu	-0.03596	0.015626	0.02138
NBAS	FingerOA	Inhibitory neurons	0.155164	0.066682	0.01997	PDE6C	FingerOA	Excitatory neurons	0.202634	0.087619	0.02074	IGSF22	SpineOA	Dopaminergic neuron	-0.04557	0.019803	0.02138
RPL8	HipOA	Dopaminergic neuron	0.154943	0.066604	0.02	LMO7	HandOA	Inhibitory neurons	-0.07983	0.034524	0.02076	LINC0053	ThumbOA	Microglia	-0.07539	0.032768	0.0214
C1QTNF6	HipOA	Inhibitory neurons	-0.06076	0.026116	0.02	HLA-DRB	FingerOA	Microglia	-0.11371	0.049182	0.02078	PIGZ	FingerOA	Astrocytes	-0.0791	0.03439	0.02144
AC011462	HipOA	Astrocytes	0.057279	0.024626	0.02002	AC012593	HandOA	OPC/COP	-0.05133	0.022207	0.02081	PIGZ	FingerOA	Excitatory neurons	-0.16772	0.072918	0.02144
APTX	SpineOA	Microglia	0.048678	0.020933	0.02005	DAZAP1	HipOA	Dopaminergic neuron	-0.05937	0.02569	0.02084	MRAS	KneeOA	Inhibitory neurons	0.042487	0.018473	0.02145
SAT2	HandOA	Excitatory neurons	-0.21584	0.092838	0.02008	CRYM	KneeOA	Serotonergic-like n	-0.0417	0.01806	0.02084	MPHOSPI	SpineOA	Serotonergic-like neu	-0.05903	0.025666	0.02145
LINC0135	ThumbOA	Astrocytes	0.103467	0.044509	0.02009	LMO7	ThumbOA	Inhibitory neurons	-0.1092	0.047259	0.02085	THEM6	KneeOA	Excitatory neurons	0.066043	0.028717	0.02146
CCDC25	HandOA	Serotonergic-like neu	-0.05993	0.025779	0.02009	TMEM45	HipOA	Serotonergic-like neu	-0.02822	0.012213	0.02086	RNF114	HipOA	Oligodendrocytes	-0.06355	0.027634	0.02147
KCNMB4	HipOA	Oligodendrocytes	-0.06137	0.026399	0.02009	KIAA0930	SpineOA	Oligodendrocytes	0.040441	0.017511	0.02092	ACP6	KneeOA	Astrocytes	-0.0283	0.012308	0.02148
ZNF738	HandOA	Inhibitory neurons	-0.07081	0.030466	0.02011	ZSCAN18	FingerOA	Oligodendrocytes	-0.13016	0.056364	0.02093	ACP6	KneeOA	Excitatory neurons	-0.05466	0.023773	0.02148
BSPRY	FingerOA	Excitatory neurons	-0.06987	0.030064	0.02012	SRR	KneeOA	Serotonergic-like n	0.03341	0.01447	0.02095	FAM184B	HipOA	Inhibitory neurons	0.06823	0.029677	0.0215
S100A14	ThumbOA	Serotonergic-like neu	0.053463	0.023006	0.02013	PHACTR4	HipOA	Oligodendrocytes	-0.0424	0.018364	0.02096	PFKL	SpineOA	Oligodendrocytes	0.052668	0.022915	0.02154
KNOP1	HandOA	Endothelial cells	-0.05654	0.02434	0.02018	IQCB1	HipOA	Oligodendrocytes	0.039858	0.017267	0.02098	MROH6	HipOA	Serotonergic-like neu	-0.06847	0.	

ZSCAN18	KneeOA	Astrocytes	-0.05269	0.022924	0.02154	CD151	FingerOA	OPC/COP	0.074401	0.032543	0.02224	AMPD3	FingerOA	Microglia	-0.11405	0.050158	0.02298
ZSCAN18	KneeOA	Excitatory neurons	-0.06823	0.029685	0.02154	SLC27A2	KneeOA	Excitatory neurons	0.03042	0.013307	0.02226	UTS2	HandOA	Dopaminergic neuron	0.037609	0.016558	0.02313
ZSCAN18	KneeOA	OPC/COP	-0.05791	0.025198	0.02154	ATP8B4	KneeOA	Excitatory neurons	0.036182	0.015828	0.02226	EFCAB2	ThumbOA	Microglia	-0.06208	0.02734	0.02316
MZF1	FingerOA	Serotonergic-like neuron	0.085339	0.037144	0.02159	CPNE1	FingerOA	Dopaminergic neuron	0.099423	0.04352	0.02234	EFCAB2	ThumbOA	Oligodendrocytes	-0.09464	0.041679	0.02316
MZF1	FingerOA	Dopaminergic neuron	0.086683	0.037729	0.02159	ACTR2	SpineOA	Serotonergic-like neuron	-0.10012	0.043836	0.02237	CAPN8	HandOA	Astrocytes	0.057611	0.025374	0.02318
NBPF26	SpineOA	Inhibitory neurons	0.064756	0.028196	0.02164	ACTR2	SpineOA	Dopaminergic neuron	-0.07376	0.032295	0.02237	CCDC90B	SpineOA	Dopaminergic neuron	-0.04453	0.019616	0.0232
MAPK3	HandOA	Serotonergic-like neuron	-0.1329	0.057887	0.02168	AL160291	KneeOA	Oligodendrocytes	-0.03073	0.013461	0.02242	FREM2	HandOA	Astrocytes	0.036251	0.015969	0.0232
DPYSL4	FingerOA	Oligodendrocytes	-0.12814	0.055832	0.02173	AL160291	KneeOA	OPC/COP	-0.0328	0.014366	0.02242	HLA-A	KneeOA	Astrocytes	0.05841	0.02573	0.0232
ZNF436-A	HipOA	Serotonergic-like neuron	-0.04959	0.021608	0.02174	MFS13A	SpineOA	Serotonergic-like neuron	-0.05881	0.025761	0.02243	PIK3R3	SpineOA	Dopaminergic neuron	0.051281	0.02259	0.0232
ASIC1	HandOA	Oligodendrocytes	0.058465	0.025482	0.02177	IQCH	KneeOA	Excitatory neurons	0.039866	0.017469	0.022483	IGF1R	HipOA	Endothelial cells	0.040794	0.017977	0.02325
AATF	KneeOA	Oligodendrocytes	-0.02478	0.010806	0.02181	MINDY2	ThumbOA	Oligodendrocytes	-0.10006	0.043859	0.02253	CDK10	KneeOA	Excitatory neurons	0.058693	0.025871	0.02329
NR1D2	KneeOA	Serotonergic-like neuron	-0.0618	0.02696	0.02189	TDRKH	KneeOA	Excitatory neurons	-0.04291	0.018809	0.02253	RPS26	KneeOA	Endothelial cells	-0.03442	0.015177	0.02333
CACNA1C	ThumbOA	OPC/COP	-0.06654	0.029033	0.02191	ZNF738	HandOA	Excitatory neurons	-0.07342	0.032195	0.02258	RPS26	KneeOA	Excitatory neurons	-0.05973	0.026336	0.02333
PIGV	HipOA	Excitatory neurons	0.047527	0.02074	0.02193	APIP	HandOA	Serotonergic-like neuron	-0.04672	0.020497	0.02264	RPS26	KneeOA	Serotonergic-like neuron	-0.014	0.00619	0.02333
MAP2K5	KneeOA	Excitatory neurons	0.04572	0.019957	0.02197	EXOC3-A	KneeOA	Serotonergic-like neuron	-0.0468	0.02055	0.02266	RPS26	KneeOA	Dopaminergic neuron	-0.0146	0.00643	0.02333
MAP2K5	KneeOA	Oligodendrocytes	0.039443	0.017217	0.02197	UBE2Q2P	HandOA	Dopaminergic neuron	-0.06829	0.02997	0.02269	AL355353	HandOA	Excitatory neurons	0.08389	0.037005	0.02339
TDRD5	ThumbOA	Excitatory neurons	-0.06063	0.026465	0.02197	ERMAP	HandOA	Serotonergic-like neuron	0.078176	0.034309	0.02269	AL513329	SpineOA	Excitatory neurons	-0.07325	0.032315	0.0234
RNASEH2	SpineOA	Excitatory neurons	0.108338	0.047291	0.02197	FAM184B	HipOA	Excitatory neurons	0.045543	0.019992	0.02272	COL18A1	KneeOA	Dopaminergic neuron	-0.0382	0.01686	0.0234
CENPP	FingerOA	Dopaminergic neuron	0.077532	0.033846	0.02198	FAM184B	HipOA	Serotonergic-like neuron	0.020373	0.008943	0.02272	PGS1	HipOA	Oligodendrocytes	0.040525	0.017877	0.0234
CYB561	SpineOA	Excitatory neurons	-0.01562	0.006823	0.022051	FAM184B	HipOA	Dopaminergic neuron	0.01789	0.007853	0.02272	SLC25A2	KneeOA	Serotonergic-like neuron	-0.0414	0.01826	0.02344
PIGP	HandOA	Excitatory neurons	-0.08509	0.03717	0.02207	MAP2K5	KneeOA	Inhibitory neurons	0.041966	0.018424	0.02274	GNGL1	HipOA	OPC/COP	-0.04967	0.021924	0.02348
TTC3	HandOA	Excitatory neurons	0.078857	0.034448	0.02207	MAP2K5	KneeOA	Microglia	0.037574	0.016496	0.02274	CHST13	FingerOA	Microglia	0.076404	0.033724	0.02348
ADAP2	FingerOA	Oligodendrocytes	0.105373	0.046042	0.0221	FAM153A	HandOA	Inhibitory neurons	0.043431	0.019067	0.02274	TDRD5	ThumbOA	Inhibitory neurons	-0.06134	0.027078	0.02349
CLTCL1	HipOA	Oligodendrocytes	0.05529	0.024162	0.02212	AGA	HandOA	Serotonergic-like neuron	0.063491	0.02788	0.02277	CCT8	KneeOA	Serotonergic-like neuron	-0.0376	0.01658	0.02352
MARK1	ThumbOA	Astrocytes	-0.09297	0.04063	0.02212	POU5F1	HandOA	Excitatory neurons	0.068506	0.030084	0.02278	LSMEM1	HipOA	Excitatory neurons	0.074536	0.032912	0.02353
TSPAN15	FingerOA	Oligodendrocytes	-0.10285	0.044951	0.02214	PRPH2	ThumbOA	Dopaminergic neuron	-0.03642	0.015995	0.02279	AP003071	SpineOA	Astrocytes	0.076359	0.033722	0.02355
LEPROT	HipOA	Serotonergic-like neuron	-0.039598	0.01731	0.02216	VAV3	HandOA	Excitatory neurons	-0.09558	0.041982	0.02281	AP003071	KneeOA	Astrocytes	0.053279	0.023529	0.02355
PRPH2	ThumbOA	Excitatory neurons	-0.08528	0.037289	0.0222	S100A13	ThumbOA	Astrocytes	-0.12787	0.056192	0.02287	RNF217	ThumbOA	Oligodendrocytes	-0.09348	0.041292	0.02358
PRPH2	ThumbOA	Inhibitory neurons	-0.08036	0.035141	0.0222	S100A13	ThumbOA	Serotonergic-like neuron	-0.08725	0.038341	0.02287	ANKRD7	FingerOA	Oligodendrocytes	0.062799	0.027829	0.02363
EPN3	SpineOA	Dopaminergic neuron	-0.04895	0.021406	0.02222	FOXRED	KneeOA	Dopaminergic neuron	0.04699	0.02065	0.02289	GEN1	HipOA	Endothelial cells	-0.03113	0.013762	0.02368
TRMT10B	KneeOA	Excitatory neurons	-0.10381	0.045398	0.02222	CCNY	FingerOA	Excitatory neurons	-0.18741	0.082372	0.0229	VAMP3	SpineOA	Serotonergic-like neuron	0.067981	0.030058	0.02372
RARRES1	SpineOA	Excitatory neurons	-0.09078	0.039699	0.02222	PTTG1IP	ThumbOA	Serotonergic-like neuron	0.120937	0.053188	0.02298	MYO6	HandOA	Excitatory neurons	0.07607	0.03364	0.02374
MYO6	HandOA	Inhibitory neurons	0.077161	0.034122	0.02374	DYNLL2	KneeOA	Dopaminergic neuron	0.02771	0.01231	0.02441	MAPT	ThumbOA	Astrocytes	0.056201	0.025116	0.025242
TMEM91	HipOA	Dopaminergic neuron	-0.05244	0.023195	0.02377	TESC	ThumbOA	Excitatory neurons	0.063482	0.02821	0.024428	NPIP12	FingerOA	Excitatory neurons	-0.14596	0.065239	0.02527
B3GNT8	HipOA	Serotonergic-like neuron	0.072201	0.031936	0.02377	DEAF1	KneeOA	Oligodendrocytes	-0.04979	0.022127	0.02443	PACRG	KneeOA	Serotonergic-like neuron	-0.0494	0.02207	0.02528
BNIP3	FingerOA	Dopaminergic neuron	-0.19242	0.085149	0.02383	CEP128	KneeOA	OPC/COP	-0.03384	0.015048	0.02452	AC011462	KneeOA	Excitatory neurons	0.04017	0.017961	0.02532
LINC0225	HandOA	Excitatory neurons	-0.10259	0.045402	0.02385	TARSL2	HandOA	Excitatory neurons	-0.07496	0.033336	0.02454	CENPP	ThumbOA	Inhibitory neurons	0.041912	0.018741	0.025327
POLQ	SpineOA	Inhibitory neurons	-0.06304	0.027902	0.02387	KALRN	HipOA	Serotonergic-like neuron	-0.04816	0.021427	0.02461	ACADS	FingerOA	Excitatory neurons	-0.07226	0.032317	0.02536
SYCE3	FingerOA	Dopaminergic neuron	-0.14916	0.066033	0.02389	ZNF880	FingerOA	OPC/COP	0.073326	0.032628	0.02462	ST6GAL2	KneeOA	Excitatory neurons	0.063735	0.028509	0.02538
TEX14	HipOA	Oligodendrocytes	-0.05644	0.024993	0.02392	LLGL1	SpineOA	Serotonergic-like neuron	-0.05615	0.024995	0.02467	FRY-AS1	FingerOA	Dopaminergic neuron	0.112754	0.050443	0.0254
TRIM66	KneeOA	Astrocytes	0.040336	0.017865	0.02396	ZNF589	FingerOA	Excitatory neurons	-0.08458	0.037649	0.024674	ATG3	HipOA	Serotonergic-like neuron	0.079026	0.035357	0.02541
TRIM66	KneeOA	OPC/COP	0.031158	0.01138	0.02396	TAGLN3	HipOA	Serotonergic-like neuron	0.07581	0.033757	0.02472	ZCRB1	KneeOA	Excitatory neurons	0.083063	0.037163	0.02541
LINC0248	FingerOA	Oligodendrocytes	0.135669	0.060103	0.02399	KCNIP4	ThumbOA	Serotonergic-like neuron	-0.05945	0.026483	0.02478	PNLDC1	HipOA	Oligodendrocytes	0.061241	0.027403	0.02543
HMBOX1	KneeOA	Serotonergic-like neuron	-0.023	0.01021	0.024	LINC0151	HandOA	Astrocytes	-0.08073	0.035969	0.0248	FSD2	HipOA	Excitatory neurons	-0.07262	0.032497	0.02544
HMBOX1	KneeOA	Dopaminergic neuron	-0.0191	0.00844	0.024	LINC0151	HandOA	Excitatory neurons	-0.06806	0.030324	0.0248	PARK7	KneeOA	Serotonergic-like neuron	-0.0305	0.01364	0.02545
ASPHD1	ThumbOA	Oligodendrocytes	0.127578	0.056534	0.02403	ANKDD1	HandOA	Inhibitory neurons	-0.06295	0.028056	0.02485	CYB561	FingerOA	Inhibitory neurons	-0.03725	0.016674	0.02547
KCTD13	ThumbOA	Oligodendrocytes	0.095178	0.042177	0.02403	MRII	HandOA	Serotonergic-like neuron	0.087475	0.038986	0.02485	LMO7DN	ThumbOA	Excitatory neurons	0.108076	0.048387	0.02551
GHRH	KneeOA	Serotonergic-like neuron	-0.041	0.01817	0.02403	AGO2	KneeOA	Oligodendrocytes	-0.04847	0.021603	0.024862	CLXN	HipOA	Serotonergic-like neuron	-0.0403	0.018043	0.02552
SPATA20	HipOA	Dopaminergic neuron	-0.03542	0.015704	0.0241	SESTD1	KneeOA	Oligodendrocytes	-0.03822	0.017034	0.02487	TLK1	HandOA	Serotonergic-like neuron	0.070731	0.031678	0.02556
YLP1M1	HandOA	Oligodendrocytes	-0.06383	0.0283	0.0241	MTHFS	FingerOA	Dopaminergic neuron	-0.12061	0.053783	0.02493	MORN1	SpineOA	Excitatory neurons	-0.07628	0.034164	0.02556
IGFALS	SpineOA	Serotonergic-like neuron	-0.04498	0.019946	0.02412	SRR	HipOA	Serotonergic-like neuron	-0.04138	0.018451	0.02493	CENPP	HandOA	Inhibitory neurons	0.030225	0.013541	0.025609
PTPN13	ThumbOA	Oligodendrocytes	-0.08957	0.039724	0.02414	APTR	KneeOA	Serotonergic-like neuron	-0.029	0.01295	0.02494	ZNF490	FingerOA	Excitatory neurons	0.143876	0.064511	0.02573
DNAH11	SpineOA	Endothelial cells	0.052584	0.023322	0.02415	LLGL1	ThumbOA	Serotonergic-like neuron	-0.10125	0.045167	0.02499	CENPP	FingerOA	Astrocytes	0.061906	0.027763	0.02576
DNAH11	SpineOA	Pericyte	0.035978	0.015956	0.02415	ARFIP1	KneeOA	Astrocytes	0.037213	0.016604	0.02501	ASPN	FingerOA	Excitatory neurons	0.139277	0.062461	0.02576
EPB41L2	ThumbOA	Oligodendrocytes	-0.12085	0.053601	0.02416	KNOP1	HandOA	Oligodendrocytes	-0.03752	0.016743	0.02504	OGN	FingerOA	Excitatory neurons	0.108893	0.048835	0.02576
PTPN12	ThumbOA	Excitatory neurons	0.089697	0.039787	0.02417	D2HGDH	HipOA	Oligodendrocytes	0.04691	0.02094	0.02508	CENPP	FingerOA	Excitatory neurons	0.058367	0.026176	0.02576
PTPN12	ThumbOA	Inhibitory neurons	0.062714	0.027818	0.02417	TRAF3	HandOA	Excitatory neurons	0.096364	0.043023	0.0251	OGN	FingerOA	Inhibitory neurons	0.100709	0.045165	0.02576
PTPN12	ThumbOA	OPC/COP	0.097091	0.043067	0.02417	MRPL21	HipOA	Dopaminergic neuron	-0.02392	0.010678	0.02511	CENPP	FingerOA	Microglia	0.069793	0.0313	0.02576
PAQR6	SpineOA	Serotonergic-like neuron	-0.03053	0.013547	0.02424	AC017076	HandOA	Excitatory neurons	0.096006	0.042865	0.02511	OGN	FingerOA	Oligodendrocytes	0.133529	0.059884	0.02576
PTPN13	HipOA	Oligodendrocytes	-0.04591	0.020376	0.02424	VAMP1	KneeOA	Serotonergic-like neuron	-0.0291	0.01298	0.02513	ECM2	FingerOA	Oligodendrocytes	0.120546	0.054061	0.02576
MATN2	ThumbOA	Oligodendrocytes	-0.0796	0.035341	0.02431	FLOT1	HandOA	Inhibitory neurons	0.086077	0.03845	0.025177	CENPP	FingerOA	OPC/COP	0.060736	0.027238	0.02576
ZNF880	FingerOA	Excitatory neurons	0.060759	0.026983	0.02434	FLOT1	ThumbOA	Excitatory neurons	0.254773	0.113809	0.025181	CENPP	FingerOA	Pericyte	0.075996	0.034082	0.02576
ZNF880	FingerOA	Oligodendrocytes	0.071587	0.031792	0.02434	CDK10	HandOA	Excitatory neurons	0.097146	0.043404	0.02521	GLB1L3	HipOA	Excitatory neurons	-0.05456	0.024478	0.02581
USP14	ThumbOA	Oligodendrocytes	-0.10995	0.048833	0.02435	LINC0248	FingerOA	Excitatory neurons	0.159917	0.071455	0.02522	MTHFSD	HipOA	Excitatory neurons	0.058554	0.02	

ERI1	KneeOA	Astrocytes	0.042945	0.019268	0.02583	UPF3A	SpineOA	Serotonergic-like neu	0.060147	0.027079	0.02634	CREG2	KneeOA	Dopaminergic neur	-0.0369	0.01669	0.02717
ZNF429	HandOA	Excitatory neurons	0.044868	0.020131	0.02583	UQC6	HipOA	Dopaminergic neuron	-0.06257	0.028172	0.02636	YIPF4	HipOA	Serotonergic-like neu	-0.05933	0.026873	0.02725
PLCB3	HandOA	Excitatory neurons	0.071848	0.032239	0.02584	RBPM2	HandOA	Excitatory neurons	-0.07441	0.033522	0.02643	TARSL2	FingerOA	Excitatory neurons	-0.10708	0.0485	0.02725
STK33	HandOA	OPC/COP	-0.0444	0.019923	0.02585	GP2	FingerOA	Serotonergic-like neu	0.128244	0.057795	0.02649	ZNF680	KneeOA	Astrocytes	-0.05534	0.025075	0.0273
PTRH1	HipOA	Dopaminergic neuron	0.058928	0.026443	0.02585	RASGEF1	HipOA	OPC/COP	0.048293	0.021764	0.02649	SIDT2	HandOA	Serotonergic-like neu	-0.08004	0.036273	0.02734
ATP2B4	HipOA	Oligodendrocytes	0.04839	0.021717	0.02587	TRAPPC2	HipOA	Serotonergic-like neu	0.031047	0.013997	0.02655	SETD6	KneeOA	Excitatory neurons	-0.05896	0.026717	0.02734
ZNF880	HandOA	Inhibitory neurons	0.050905	0.022852	0.02591	TRAPPC2	HipOA	Dopaminergic neuron	0.034923	0.015745	0.02655	ADH5	FingerOA	Serotonergic-like neu	-0.10677	0.048402	0.02739
ZNF880	HandOA	Dopaminergic neuron	0.037025	0.016621	0.02591	CXCL11	ThumbOA	Dopaminergic neuron	-0.0602	0.027145	0.02657	ZDHHC20	KneeOA	Oligodendrocytes	-0.0498	0.02259	0.0275
PLEKHB1	FingerOA	Dopaminergic neuron	-0.04518	0.020285	0.02593	DBN1	ThumbOA	Excitatory neurons	0.110283	0.049743	0.02662	LINC0053	KneeOA	Oligodendrocytes	-0.0283	0.01284	0.0275
ORC2	HipOA	Oligodendrocytes	-0.05195	0.023326	0.02594	DBN1	ThumbOA	Serotonergic-like neu	0.094825	0.042771	0.02662	MRPL42	KneeOA	Serotonergic-like n	-0.0337	0.01531	0.02752
THAP4	KneeOA	Excitatory neurons	-0.04288	0.019256	0.02596	TSFM	SpineOA	Serotonergic-like neu	0.055789	0.025165	0.02663	PDXK	KneeOA	Microglia	-0.0201	0.00912	0.02752
KRTAP5-1	KneeOA	Excitatory neurons	-0.05663	0.025438	0.02599	ADAP2	KneeOA	Oligodendrocytes	-0.0412	0.018589	0.02668	MRPL42	KneeOA	Dopaminergic neur	-0.0363	0.01646	0.02752
SERPIND1	FingerOA	Astrocytes	-0.13915	0.0625	0.02599	HCG27	FingerOA	Excitatory neurons	0.123047	0.055522	0.02668	RSU1	FingerOA	Oligodendrocytes	0.14396	0.06532	0.02753
LINC0185	SpineOA	Oligodendrocytes	-0.07159	0.032159	0.02601	YLP1	FingerOA	Oligodendrocytes	-0.09119	0.041168	0.02676	KALRN	KneeOA	Serotonergic-like n	-0.0373	0.01693	0.02756
FAM171B	HipOA	Oligodendrocytes	-0.01837	0.008251	0.02603	AC007040	ThumbOA	Inhibitory neurons	-0.0775	0.035008	0.02685	CCDC25	ThumbOA	Serotonergic-like neu	-0.07829	0.035542	0.02762
ATP2C2	KneeOA	Serotonergic-like n	-0.0382	0.017116	0.02607	WDSUB1	KneeOA	Astrocytes	0.037407	0.016899	0.02686	RPS16	ThumbOA	Serotonergic-like neu	0.126863	0.0576	0.02763
PIK3R3	HandOA	Dopaminergic neuron	0.061373	0.027589	0.02611	WDSUB1	KneeOA	Microglia	0.038761	0.017511	0.02686	KNOP1	KneeOA	Endothelial cells	-0.03032	0.013769	0.02766
NEK3	HipOA	Dopaminergic neuron	0.023556	0.010589	0.02611	TRAF3IP2	HipOA	Dopaminergic neuron	0.059248	0.026768	0.02687	HDHD5	HandOA	Excitatory neurons	0.061039	0.02772	0.02767
C10orf67	SpineOA	Oligodendrocytes	-0.04751	0.02136	0.02612	ITGB3BP	HipOA	Astrocytes	-0.0338	0.01528	0.02697	HDHD5	HandOA	Inhibitory neurons	0.064709	0.029387	0.02767
NINL	SpineOA	Astrocytes	-0.03901	0.017538	0.026127	ALG6	HipOA	Excitatory neurons	0.042328	0.019136	0.02697	MINDY2	KneeOA	Oligodendrocytes	-0.04355	0.019778	0.02768
MAP2K5	KneeOA	Astrocytes	0.046827	0.021053	0.02613	ITGB3BP	HipOA	Inhibitory neurons	-0.0273	0.012341	0.02697	IPP	HipOA	Serotonergic-like neu	0.049779	0.02261	0.02769
GNA15	ThumbOA	Excitatory neurons	0.084754	0.038104	0.02613	ITGB3BP	HipOA	Excitatory neurons	-0.0266	0.012024	0.02697	SFTPD	ThumbOA	Astrocytes	-0.07343	0.033364	0.02775
LINC0111	SpineOA	Excitatory neurons	-0.05311	0.023878	0.02614	DYNC1I2	ThumbOA	Inhibitory neurons	-0.12323	0.055716	0.02698	CUTALP	HipOA	Serotonergic-like neu	-0.02262	0.010282	0.02781
TMEM181	FingerOA	Oligodendrocytes	-0.06133	0.027585	0.0262	SF3B2	FingerOA	Astrocytes	0.159799	0.072272	0.02703	LRP12	HipOA	Serotonergic-like neu	-0.05513	0.02507	0.02786
MN1	HipOA	Oligodendrocytes	0.040505	0.018219	0.0262	SF3B2	FingerOA	Oligodendrocytes	0.136427	0.061702	0.02703	AC007040	ThumbOA	Excitatory neurons	-0.0528	0.02401	0.02788
CAV1	FingerOA	Oligodendrocytes	-0.05511	0.024792	0.02622	COX11	KneeOA	Serotonergic-like n	-0.0456	0.02063	0.02707	TAB2	KneeOA	Astrocytes	-0.03148	0.014322	0.02794
CCDC25	ThumbOA	Dopaminergic neuron	-0.07413	0.033355	0.02625	FMC1	HipOA	Dopaminergic neuron	-0.06205	0.028074	0.02709	AL031056	KneeOA	Astrocytes	-0.03206	0.014585	0.02794
CCHCR1	KneeOA	Excitatory neurons	0.042186	0.018983	0.02626	KIAA0087	FingerOA	Serotonergic-like neu	0.148079	0.066997	0.02709	LLGL1	HipOA	Serotonergic-like neu	-0.05088	0.023155	0.028
MROH6	ThumbOA	Serotonergic-like neu	-0.12248	0.055124	0.02629	RNASEH2	HandOA	Excitatory neurons	0.12542	0.056746	0.02709	AC127024	SpineOA	OPC/COP	-0.05504	0.02505	0.028
NLRP2	SpineOA	Excitatory neurons	-0.03932	0.017697	0.02629	ASAP3	ThumbOA	Inhibitory neurons	-0.07801	0.035304	0.02712	HLA-C	ThumbOA	Endothelial cells	0.169012	0.076948	0.02806
ALG1L1F	KneeOA	Serotonergic-like n	-0.0305	0.01371	0.02632	TRIM66	KneeOA	Microglia	0.030419	0.013768	0.02715	VRK3	ThumbOA	Serotonergic-like neu	0.101482	0.046209	0.02808
ADNP	HipOA	Serotonergic-like neu	-0.06205	0.027934	0.02633	RBMS2	KneeOA	Serotonergic-like n	-0.0488	0.02211	0.02716	LINC0064	ThumbOA	OPC/COP	0.051083	0.02326	0.02808
GGACT	ThumbOA	Dopaminergic neuron	0.130752	0.059537	0.02808	TUSC3	KneeOA	Dopaminergic neur	-0.06	0.02745	0.02885	UTP23	SpineOA	Oligodendrocytes	-0.10631	0.048873	0.02962
ADAMTS1	ThumbOA	Inhibitory neurons	0.079966	0.03643	0.02816	AQP3	KneeOA	Serotonergic-like n	-0.0368	0.01682	0.02886	MSH6	HandOA	Oligodendrocytes	-0.07288	0.033507	0.02963
TNS3	SpineOA	Astrocytes	0.071939	0.032773	0.02816	WDSUB1	KneeOA	Excitatory neurons	0.033952	0.015539	0.02889	POGLUT1	FingerOA	Excitatory neurons	0.102627	0.047185	0.02963
ZNF556	HandOA	Microglia	0.058912	0.026839	0.02816	SPATA22	KneeOA	Excitatory neurons	0.035221	0.016122	0.02891	PYROXDK	KneeOA	Serotonergic-like n	-0.0362	0.01665	0.02964
FAM89A	ThumbOA	Astrocytes	-0.07123	0.032453	0.02818	B4GALT7	HandOA	Dopaminergic neuron	0.094898	0.043445	0.02894	PTBP2	ThumbOA	Dopaminergic neuron	-0.14603	0.067145	0.02964
ZNF556	ThumbOA	Microglia	0.06636	0.030257	0.02829	MAGI2	HipOA	Oligodendrocytes	-0.07373	0.033775	0.02903	AC118754	HipOA	Excitatory neurons	-0.05967	0.027436	0.02965
RAB6C	SpineOA	Oligodendrocytes	-0.03111	0.014183	0.0283	A3GALT2	SpineOA	Oligodendrocytes	-0.05047	0.023119	0.02904	ADAL	KneeOA	Dopaminergic neur	-0.0463	0.02131	0.02967
SPATA7	ThumbOA	Dopaminergic neuron	-0.11128	0.05074	0.0283	REEP1	HipOA	Dopaminergic neuron	0.050506	0.02314	0.02906	FOXRED1	KneeOA	Excitatory neurons	0.068451	0.031483	0.02969
SCAPER	FingerOA	OPC/COP	0.141089	0.064337	0.02831	FTSJ3	HandOA	Serotonergic-like neu	-0.06197	0.028391	0.02907	LG14	FingerOA	Excitatory neurons	0.099156	0.045611	0.02971
MBTPS1	HipOA	Excitatory neurons	-0.09684	0.044158	0.02831	LIMD2	HandOA	Serotonergic-like neu	0.074184	0.033399	0.02907	TUSC3	FingerOA	Dopaminergic neuron	-0.14679	0.067531	0.02973
AC127024	HipOA	Inhibitory neurons	0.074328	0.033896	0.02832	HLA-DQA4	HandOA	Microglia	0.044606	0.020438	0.02907	ATP2C2	FingerOA	Serotonergic-like neu	-0.09372	0.043132	0.02979
POLI	HipOA	Excitatory neurons	-0.0611	0.027871	0.02835	LINC0242	SpineOA	Astrocytes	-0.07473	0.034238	0.02907	CDH20	SpineOA	Oligodendrocytes	-0.05644	0.025976	0.02981
TTC3	HandOA	Microglia	0.052574	0.023983	0.02837	LINC0242	SpineOA	Oligodendrocytes	-0.04865	0.022289	0.02907	CRELD1	KneeOA	Astrocytes	0.058463	0.026911	0.02982
TTC3	HandOA	Oligodendrocytes	0.04154	0.01895	0.02837	LINC0242	SpineOA	OPC/COP	-0.0411	0.01883	0.02907	PTPN13	SpineOA	Inhibitory neurons	-0.08204	0.037766	0.02983
PIK3R3	HipOA	Dopaminergic neuron	0.044691	0.020392	0.02841	SLC13A4	HipOA	Oligodendrocytes	-0.0499	0.022868	0.02911	RBM23	FingerOA	Serotonergic-like neu	0.06034	0.027778	0.02984
SPATA20	HandOA	Microglia	0.048408	0.022094	0.02845	B4GALT7	ThumbOA	Dopaminergic neuron	0.108563	0.049763	0.02914	RBM23	FingerOA	Dopaminergic neuron	0.072741	0.033487	0.02984
LRMDA	HipOA	Astrocytes	0.026455	0.012078	0.0285	LM07DN	FingerOA	Excitatory neurons	0.111471	0.051099	0.02915	AC090124	KneeOA	Excitatory neurons	-0.02051	0.009443	0.02987
PIGQ	KneeOA	Serotonergic-like n	-0.0629	0.02874	0.02851	SPINK5	KneeOA	Serotonergic-like n	-0.0342	0.01569	0.0292	AC124657	KneeOA	Inhibitory neurons	-0.02053	0.009452	0.02987
C1orf174	HipOA	Oligodendrocytes	-0.03863	0.017638	0.02853	KLHL1	HandOA	OPC/COP	0.03876	0.017776	0.02922	LRRC2	SpineOA	Excitatory neurons	-0.06067	0.027942	0.0299
AC026167	HipOA	Excitatory neurons	-0.03913	0.01787	0.02855	ARFIP1	KneeOA	Oligodendrocytes	0.035676	0.016362	0.02923	PTPN4	HipOA	Serotonergic-like neu	-0.04432	0.020409	0.0299
LINC0150	SpineOA	Microglia	-0.03655	0.016695	0.02856	DOCK7	SpineOA	Dopaminergic neuron	0.067416	0.030923	0.02925	GHRH	KneeOA	Dopaminergic neur	-0.0335	0.01544	0.02991
LINC0174	HandOA	Oligodendrocytes	-0.03727	0.017023	0.02856	WNT2B	SpineOA	Excitatory neurons	-0.0427	0.019592	0.02929	HMGN1	ThumbOA	Dopaminergic neuron	0.066512	0.030635	0.02992
LINC0223	HipOA	Microglia	-0.04842	0.022116	0.02857	IGSF22	HipOA	Serotonergic-like neu	-0.02992	0.013727	0.0293	CRYBG3	KneeOA	Excitatory neurons	0.029895	0.013772	0.02995
NMRAL1	HipOA	Serotonergic-like neu	-0.07842	0.035822	0.02859	IGSF22	HipOA	Dopaminergic neuron	-0.03791	0.017396	0.0293	NMES	ThumbOA	Serotonergic-like neu	0.06429	0.029627	0.03001
SPATA20	HipOA	Microglia	-0.03617	0.016526	0.0286	ANAPC4	SpineOA	Excitatory neurons	0.090433	0.041497	0.02931	MRPL18	HandOA	Serotonergic-like neu	0.108976	0.050224	0.03002
MPC1	FingerOA	Serotonergic-like neu	0.071107	0.03249	0.02863	NAPRT	HandOA	Excitatory neurons	0.043761	0.020082	0.02932	PABPC1L	KneeOA	OPC/COP	-0.03235	0.014909	0.03002
MET	KneeOA	Oligodendrocytes	0.012612	0.005763	0.02865	NAPRT	HandOA	Inhibitory neurons	0.047931	0.021995	0.02932	SMDT1	HipOA	Serotonergic-like neu	0.033725	0.015548	0.03007
MR1	HandOA	Oligodendrocytes	0.062763	0.028694	0.02872	NAPRT	HandOA	Serotonergic-like neu	0.031459	0.014436	0.02932	METTL18	ThumbOA	Excitatory neurons	0.134767	0.06214	0.0301
CDH2	HipOA	Oligodendrocytes	-0.0327	0.014955	0.02875	MROH6	HandOA	Excitatory neurons	0.086758	0.039813	0.02932	LRWD1	KneeOA	Dopaminergic neur	-0.0409	0.01886	0.03016
DBNL	KneeOA	Serotonergic-like n	-0.0404	0.01845	0.02877	NAPRT	HandOA	Dopaminergic neuron	0.042322	0.019421	0.02932	WFDC10E	FingerOA	Astrocytes	0.09024	0.041627	0.03017
RAB3C	KneeOA	Dopaminergic neur	-0.0439	0.0201	0.02878	TPGS2	FingerOA	Serotonergic-like neu	-0.09074	0.04169	0.02951	CALCRL	KneeOA	OPC/COP	-0.04591	0.021176	0.03017
SPATA20	HipOA	Serotonergic-like neu	-0.02848	0.013029	0.02883	GREM1	HandOA	Oligodendrocytes	-0.04805	0.022087	0.02959	SNX21	FingerOA	Serotonergic-like neu	-0.09586	0.044217	0

EPB41L4.4	ThumbOA	Astrocytes	-0.06048	0.02791	0.03023	RWDD2B	HipOA	Excitatory neurons	-0.04945	0.022922	0.03099	DLEU7	KneeOA	Microglia	0.032071	0.014936	0.03177
ECM2	HandOA	Excitatory neurons	0.07138	0.032938	0.03023	RWDD2B	HipOA	Serotonergic-like neu	-0.03355	0.016456	0.03099	AC011462	KneeOA	Inhibitory neurons	0.033134	0.015442	0.0319
ERI1	SpineOA	Astrocytes	0.057178	0.026388	0.03025	RWDD2B	HipOA	Dopaminergic neur	-0.02904	0.013464	0.03099	SLC28A2	ThumbOA	Excitatory neurons	-0.14207	0.066211	0.0319
LRPAP1	FingerOA	Excitatory neurons	0.198844	0.091774	0.03026	KNOP1	KneeOA	Oligodendrocytes	-0.02036	0.009444	0.03107	MICU1	HipOA	Inhibitory neurons	0.039888	0.018592	0.031922
CHGA	KneeOA	Dopaminergic neur	-0.0852	0.03933	0.03028	CATSPER	HandOA	Excitatory neurons	-0.092	0.042679	0.03111	MVB12B	SpineOA	Inhibitory neurons	0.060682	0.02829	0.03195
RNASEH2	HandOA	Serotonergic-like neu	0.061185	0.028244	0.03029	KCNMA1	HipOA	Astrocytes	0.060941	0.028274	0.03113	C4orf33	HipOA	Serotonergic-like neu	0.045444	0.021185	0.03195
GD12	KneeOA	Dopaminergic neur	-0.0512	0.02365	0.0303	RPL28	HipOA	Dopaminergic neur	0.176687	0.081993	0.03117	C1orf159	FingerOA	Inhibitory neurons	-0.10922	0.050916	0.03195
WWOX	ThumbOA	Excitatory neurons	0.105408	0.048665	0.03031	GEN1	SpineOA	Endothelial cells	-0.03343	0.015515	0.03117	COP1	HipOA	Oligodendrocytes	-0.08067	0.037618	0.03199
MCF2L	HipOA	Oligodendrocytes	-0.01845	0.008518	0.03034	UQCC1	HandOA	Serotonergic-like neu	0.093899	0.043575	0.03117	DHRS7	ThumbOA	Excitatory neurons	-0.18557	0.086546	0.03202
LRIG1	HipOA	Oligodendrocytes	0.044113	0.020371	0.03035	RHOD	HipOA	Serotonergic-like neu	0.04918	0.022826	0.0312	C1GALT1	ThumbOA	Inhibitory neurons	-0.09258	0.043181	0.03204
CHST15	HandOA	Microglia	0.090764	0.041919	0.03037	TCEA3	HipOA	Inhibitory neurons	-0.03447	0.016004	0.03127	AL450423	HipOA	Excitatory neurons	-0.02948	0.013752	0.03205
C1QTNF7	HandOA	Excitatory neurons	0.057367	0.026499	0.0304	STK32A	HipOA	OPC/COP	-0.04816	0.022369	0.03132	SLC35B3	KneeOA	Excitatory neurons	0.04863	0.022689	0.03209
VAMP4	SpineOA	Serotonergic-like neu	-0.03506	0.016198	0.03041	AC023790	HipOA	Inhibitory neurons	0.046673	0.021684	0.03136	C2orf74	HipOA	Oligodendrocytes	-0.03285	0.015332	0.03215
XRCC5	ThumbOA	Oligodendrocytes	0.078336	0.036188	0.03041	SLC7A14	SpineOA	Oligodendrocytes	0.075256	0.034962	0.03136	C2orf74	HipOA	Excitatory neurons	-0.02738	0.012781	0.03215
LINC0250	HipOA	Astrocytes	0.02423	0.011194	0.03042	KRTAP5-1	HipOA	Excitatory neurons	-0.06518	0.030296	0.03143	OTUD3	KneeOA	Excitatory neurons	0.031891	0.014886	0.03217
PTPRJ	HipOA	Microglia	0.046092	0.021296	0.030437	KIAA051	KneeOA	Dopaminergic neur	0.02103	0.00978	0.03146	OTUD3	KneeOA	Inhibitory neurons	0.028662	0.013379	0.03217
CENPK	HipOA	Excitatory neurons	0.036097	0.016684	0.0305	CLBA1	ThumbOA	Excitatory neurons	-0.07586	0.035267	0.03147	MED31	HipOA	Dopaminergic neur	-0.0564	0.026343	0.03227
HACD2	KneeOA	Astrocytes	0.039609	0.018311	0.03053	NBEAP2	HandOA	Serotonergic-like neu	0.083897	0.039007	0.03149	ATP6V1B	ThumbOA	Serotonergic-like neu	-0.1272	0.059419	0.0323
ZNF880	FingerOA	Inhibitory neurons	0.071378	0.033005	0.03057	GALNT13	HipOA	Oligodendrocytes	0.061245	0.028477	0.0315	ZNF407-A	ThumbOA	Dopaminergic neur	0.096238	0.044962	0.03232
ZNF880	FingerOA	Dopaminergic neur	0.051916	0.024006	0.03057	TOR3A	HandOA	Serotonergic-like neu	-0.07057	0.032816	0.03152	EXOSC6	HandOA	Inhibitory neurons	-0.10913	0.051007	0.0324
NOS1	HandOA	Oligodendrocytes	0.074123	0.034276	0.03058	GPHN	KneeOA	Oligodendrocytes	0.036669	0.017053	0.031535	ATG3	HandOA	Serotonergic-like neu	-0.10291	0.048112	0.03244
NOS1	HandOA	OPC/COP	0.042423	0.019618	0.03058	HAAO	HandOA	Serotonergic-like neu	-0.05573	0.025922	0.03155	AC087463	HipOA	Oligodendrocytes	-0.04954	0.023164	0.03246
BRK1	KneeOA	Serotonergic-like n	-0.0393	0.0182	0.03068	OXER1	HandOA	Serotonergic-like neu	-0.05464	0.025412	0.03155	ATG3	ThumbOA	Serotonergic-like neu	-0.13522	0.063241	0.0325
QPR1	KneeOA	Serotonergic-like n	0.03211	0.01486	0.0307	IFI44	ThumbOA	OPC/COP	0.08316	0.03868	0.03156	SCRN2	KneeOA	Serotonergic-like n	0.04611	0.02157	0.03253
TMEM9B	ThumbOA	Serotonergic-like neu	0.127554	0.059034	0.03072	RGPD8	FingerOA	Microglia	-0.08702	0.040486	0.0316	LRRC8A	FingerOA	Oligodendrocytes	0.069711	0.032614	0.03256
MRPL13	SpineOA	Serotonergic-like neu	-0.09089	0.042069	0.03073	CD200	HipOA	Serotonergic-like neu	-0.05136	0.023897	0.03161	DRG2	KneeOA	Excitatory neurons	0.058027	0.027151	0.03258
AC027644	SpineOA	Oligodendrocytes	0.047876	0.02216	0.030735	DYNC112	KneeOA	Inhibitory neurons	-0.05099	0.023727	0.03162	ACOT4	HipOA	Excitatory neurons	0.088948	0.041621	0.03259
RAC1	KneeOA	Dopaminergic neur	0.03657	0.01693	0.03077	TFB1M	HipOA	Excitatory neurons	0.070979	0.033032	0.03165	FOXJ3	ThumbOA	Oligodendrocytes	0.102368	0.047906	0.03261
AC084032	FingerOA	Oligodendrocytes	0.047797	0.022133	0.03081	C1QTNF7	KneeOA	Excitatory neurons	0.032781	0.01526	0.0317	ZNF124	KneeOA	Dopaminergic neur	0.0346	0.01619	0.03263
XYLT2	ThumbOA	Astrocytes	-0.08155	0.037778	0.03087	MMP24	HipOA	Oligodendrocytes	0.080955	0.037688	0.03171	CYB5A	KneeOA	Oligodendrocytes	-0.03637	0.017023	0.03264
JUP	SpineOA	Astrocytes	-0.05431	0.025177	0.03099	AC090124	SpineOA	Excitatory neurons	-0.02887	0.013439	0.03171	NEDD9	HipOA	OPC/COP	-0.04439	0.020778	0.03266
JUP	SpineOA	Oligodendrocytes	-0.04887	0.022656	0.03099	AC124657	SpineOA	Inhibitory neurons	-0.0289	0.013452	0.03171	ZNF502	ThumbOA	Excitatory neurons	-0.04924	0.023049	0.032661
SKAP2	SpineOA	Excitatory neurons	0.068429	0.032034	0.03267	SAMD5	KneeOA	Excitatory neurons	-0.05949	0.02796	0.03336	SYN3	KneeOA	Excitatory neurons	0.064836	0.030556	0.03385
GATC	HipOA	Excitatory neurons	0.049133	0.023012	0.03275	LINC0232	HipOA	Oligodendrocytes	0.034547	0.016238	0.03337	BAG5	KneeOA	Oligodendrocytes	0.042927	0.020232	0.03386
LINC0195	KneeOA	Astrocytes	0.022414	0.010499	0.03275	RNASEH2	ThumbOA	Serotonergic-like neu	0.082398	0.038737	0.03341	COA8	KneeOA	Serotonergic-like n	-0.0496	0.02339	0.03386
SLC4A7	HipOA	Dopaminergic neur	-0.05837	0.027357	0.03287	SNRNP48	ThumbOA	Dopaminergic neur	-0.13692	0.064383	0.03345	MTUS1	HipOA	Oligodendrocytes	-0.02415	0.011384	0.03389
AC024361	HandOA	Astrocytes	0.064716	0.030341	0.03293	MMP24O5	HipOA	Serotonergic-like neu	0.04438	0.02087	0.03346	2-Mar	HipOA	Excitatory neurons	-0.07139	0.033654	0.03389
MPC1	SpineOA	Serotonergic-like neu	-0.03918	0.018373	0.03296	AL356489	SpineOA	Oligodendrocytes	-0.03626	0.01705	0.03346	UGGT2	KneeOA	Excitatory neurons	0.077399	0.036487	0.0339
TNS3	HandOA	Microglia	0.077313	0.03262	0.03299	CASQ1	HandOA	Excitatory neurons	-0.0697	0.032785	0.0335	ST8SIA1	HipOA	Astrocytes	-0.04321	0.02037	0.03391
TBCK	HandOA	Serotonergic-like neu	-0.06984	0.032762	0.03304	FAM182B	SpineOA	OPC/COP	0.04224	0.019868	0.0335	NDUFA6	KneeOA	Serotonergic-like n	-0.0557	0.02627	0.03396
DIRC3	HipOA	Excitatory neurons	-0.07882	0.036977	0.03305	PLPP6	ThumbOA	Serotonergic-like neu	0.110267	0.051871	0.03352	FAM66A	KneeOA	Excitatory neurons	0.024947	0.011768	0.034019
CHST8	KneeOA	OPC/COP	0.025641	0.01203	0.03305	KNOP1	KneeOA	Astrocytes	-0.01806	0.008494	0.03353	CDC42	HipOA	Serotonergic-like neu	-0.03574	0.016859	0.03403
GALNT18	HandOA	Excitatory neurons	0.101475	0.047608	0.03305	MAGI2	KneeOA	Oligodendrocytes	-0.0561	0.026395	0.03357	PM2	ThumbOA	Oligodendrocytes	0.103521	0.048859	0.03411
DBN1	ThumbOA	Dopaminergic neur	0.074339	0.034891	0.03312	SPATA22	HipOA	Excitatory neurons	0.043692	0.020559	0.03357	LINC0109	ThumbOA	Oligodendrocytes	-0.04146	0.019572	0.03414
RILPL2	SpineOA	Oligodendrocytes	-0.06282	0.029489	0.03314	P4HA3	SpineOA	Serotonergic-like neu	0.045488	0.021406	0.03359	TMEM50E	KneeOA	Astrocytes	0.04	0.018882	0.03414
KIF6	KneeOA	Astrocytes	0.04203	0.019729	0.03314	ZNF593	KneeOA	Serotonergic-like n	-0.0207	0.00973	0.0336	CASP8	ThumbOA	Excitatory neurons	0.054335	0.025652	0.03416
LINC0126	SpineOA	Microglia	0.045343	0.021484	0.03314	ASAP3	ThumbOA	Excitatory neurons	-0.10268	0.048325	0.0336	MIR7-3HC	KneeOA	Excitatory neurons	-0.04174	0.019707	0.03419
ITGAV	HipOA	Astrocytes	-0.05124	0.022054	0.03316	SAT2	KneeOA	Excitatory neurons	-0.11496	0.054114	0.03363	ZNF429	ThumbOA	Astrocytes	0.064817	0.030605	0.03419
MMP24O5	HipOA	Oligodendrocytes	0.03599	0.016899	0.0332	CD52	HandOA	Serotonergic-like neu	0.057447	0.027045	0.03366	ODF3L2	ThumbOA	Oligodendrocytes	0.082463	0.038942	0.03421
MMP24O5	HipOA	OPC/COP	0.046471	0.021821	0.0332	EFCAB13	SpineOA	Serotonergic-like neu	-0.04869	0.02293	0.03371	PPM1K	SpineOA	Dopaminergic neur	-0.05963	0.028158	0.03421
MMP24O5	HipOA	Dopaminergic neur	0.028164	0.013225	0.0332	UTP23	KneeOA	Oligodendrocytes	-0.0722	0.034001	0.03372	C12orf60	FingerOA	Astrocytes	-0.07186	0.033952	0.03431
PAH	HandOA	OPC/COP	0.046728	0.021942	0.0332	ZNF589	KneeOA	Excitatory neurons	-0.03254	0.015323	0.033722	TFB1M	KneeOA	Oligodendrocytes	-0.0272	0.012854	0.03432
PAH	HandOA	Excitatory neurons	0.041991	0.019717	0.0332	SPCS3	SpineOA	Excitatory neurons	-0.10399	0.048977	0.03373	NP1BP12	SpineOA	Excitatory neurons	0.090769	0.04289	0.03432
PAH	HandOA	Inhibitory neurons	0.042832	0.020112	0.0332	BHMT	KneeOA	Astrocytes	-0.04323	0.020359	0.03373	SCARB1	FingerOA	Oligodendrocytes	0.103332	0.048835	0.03435
MEPCE	SpineOA	Excitatory neurons	-0.08083	0.037963	0.03324	SPATA20	SpineOA	Microglia	-0.03967	0.018687	0.03376	TTC28	HipOA	Excitatory neurons	0.106886	0.050518	0.03436
PILRA	SpineOA	Inhibitory neurons	0.064979	0.030518	0.03324	CCDC80	HandOA	Serotonergic-like neu	-0.02043	0.009625	0.03378	LINC0222	SpineOA	Excitatory neurons	-0.0539	0.025474	0.03436
PILRB	SpineOA	Oligodendrocytes	0.030301	0.014231	0.03324	CCDC80	HandOA	Dopaminergic neur	-0.05735	0.02702	0.03378	USP47	HandOA	Excitatory neurons	0.100106	0.047318	0.03438
PILRB	SpineOA	OPC/COP	0.034456	0.016183	0.03324	RUBCNL	ThumbOA	Excitatory neurons	-0.07802	0.036755	0.03378	JAKMIP3	HandOA	Excitatory neurons	-0.13784	0.06516	0.03439
GOLGA6L	SpineOA	Excitatory neurons	-0.02545	0.011952	0.033254	AL031599	KneeOA	Inhibitory neurons	0.036716	0.017297	0.03378	JAKMIP3	HandOA	OPC/COP	-0.07289	0.034454	0.03439
PTPN13	HipOA	OPC/COP	-0.08402	0.039465	0.03326	TSPAN4	KneeOA	Serotonergic-like n	0.03422	0.01612	0.03378	C16orf95	FingerOA	Excitatory neurons	0.117028	0.055323	0.0344
MPZ	HipOA	Oligodendrocytes	0.028891	0.013572	0.03328	HLA-DRB	ThumbOA	Serotonergic-like neu	-0.02597	0.012235	0.033792	CMC2	KneeOA	Oligodendrocytes	0.046315	0.021901	0.03445
SLC41A2	SpineOA	Dopaminergic neur	0.071206	0.033458	0.03332	CAPRIN2	ThumbOA	Excitatory neurons	0.13938	0.065677	0.03382	LINC0053	KneeOA	Microglia	-0.03074	0.014539	0.03446
HAGH	SpineOA	Oligodendrocytes	-0.02659	0.02659	0.03332	KRI1	FingerOA	Excitatory neurons	0.136693	0.064418	0.03384	SREK1IP1	SpineOA	Serotonergic-like neu	0.055192	0.0261	0.03446
AC114485	SpineOA	Oligodendrocytes	-0.02118	0.009955	0.03335	SCFD1	SpineOA	Excitatory neurons	0.060601	0.0							

NTAQ1	FingerOA	Serotonergic-like neu	0.093018	0.043992	0.03448	NPIP12	KneeOA	Excitatory neurons	0.064627	0.030702	0.03529	AP003071	ThumbOA	Astrocytes	0.111734	0.053322	0.03613
VAPB	HipOA	Oligodendrocytes	-0.04342	0.020535	0.03449	FNDC7	ThumbOA	Oligodendrocytes	0.052493	0.024937	0.03529	SESTD1	SpineOA	Excitatory neurons	0.040386	0.019275	0.03615
KYAT3	SpineOA	Dopaminergic neuron	0.046194	0.021851	0.03451	MAP3K20	KneeOA	Microglia	0.038504	0.018293	0.03531	HACD2	ThumbOA	Astrocytes	0.095869	0.045763	0.03618
RNF8	FingerOA	Astrocytes	-0.07602	0.035962	0.03453	MESD	HandOA	Serotonergic-like neu	0.073298	0.034825	0.03531	CR1	ThumbOA	Oligodendrocytes	0.047186	0.022525	0.03619
RNF8	FingerOA	Excitatory neurons	-0.08686	0.041093	0.03453	AL031599	SpineOA	Inhibitory neurons	0.051675	0.024554	0.03533	RHEBL1	HipOA	Dopaminergic neuron	0.071257	0.034018	0.0362
RRP15	FingerOA	Excitatory neurons	0.068913	0.032603	0.03454	CCDC80	FingerOA	Serotonergic-like neu	-0.02944	0.013989	0.03535	GSDMD	HandOA	Serotonergic-like neu	-0.04153	0.019829	0.03621
AC091551	HipOA	Oligodendrocytes	-0.05246	0.024822	0.03455	CCDC80	FingerOA	Dopaminergic neuron	-0.08264	0.039272	0.03535	ABCC9	HandOA	Astrocytes	0.106006	0.050621	0.03625
IL20RA	HipOA	OPC/COP	-0.04542	0.021488	0.03455	PLAC8	KneeOA	Microglia	-0.0338	0.016061	0.03536	DIAPH3	SpineOA	Astrocytes	-0.08011	0.038256	0.03626
NUP88	KneeOA	Excitatory neurons	0.060147	0.028467	0.03461	CLEC18A	SpineOA	OPC/COP	-0.03619	0.0172	0.03539	LINC0244	HipOA	OPC/COP	-0.03882	0.018541	0.0363
SCGB2B2	FingerOA	Inhibitory neurons	0.09511	0.045016	0.03462	CHGA	FingerOA	Dopaminergic neuron	-0.20418	0.097098	0.03548	NIPSNAP	KneeOA	Serotonergic-like neu	-0.0557	0.02659	0.03631
ARL17B	ThumbOA	Oligodendrocytes	0.019459	0.009211	0.03465	INPP1	FingerOA	Excitatory neurons	-0.07569	0.035998	0.0355	CDO1	HandOA	Serotonergic-like neu	0.065608	0.031347	0.03635
FAM184B	HipOA	Oligodendrocytes	0.035013	0.016575	0.03465	NDST4	KneeOA	Dopaminergic neuron	-0.0307	0.01459	0.03555	SPINK9	SpineOA	Excitatory neurons	-0.04504	0.021518	0.03635
PGAP6	KneeOA	Serotonergic-like neu	0.03997	0.01894	0.03479	IQGAP1	KneeOA	Astrocytes	0.036902	0.017556	0.03555	KANSL1	ThumbOA	Oligodendrocytes	0.022973	0.010978	0.036373
GPX7	HandOA	Serotonergic-like neu	-0.03821	0.018101	0.0348	ZSCAN18	FingerOA	Astrocytes	-0.11643	0.055415	0.03564	LRRC63	ThumbOA	Oligodendrocytes	-0.12188	0.058242	0.03638
IPP	ThumbOA	Serotonergic-like neu	0.083602	0.039622	0.03486	ZSCAN18	FingerOA	Excitatory neurons	-0.15077	0.071759	0.03564	IL17RC	ThumbOA	Inhibitory neurons	0.088852	0.042471	0.03643
RAD51C	ThumbOA	Inhibitory neurons	0.05806	0.02752	0.034881	ZSCAN18	FingerOA	OPC/COP	-0.12798	0.060911	0.03564	NDRG4	HipOA	Excitatory neurons	-0.09569	0.04574	0.03644
KANSL1	ThumbOA	Astrocytes	0.021832	0.010348	0.034882	EEF1AKM	HipOA	Serotonergic-like neu	-0.05854	0.027868	0.03567	PPA1	ThumbOA	Excitatory neurons	-0.23206	0.110959	0.03649
ZNF534	HandOA	Excitatory neurons	-0.08751	0.041483	0.0349	LINC0225	KneeOA	Astrocytes	-0.05955	0.028354	0.03571	FOXRED2	ThumbOA	Inhibitory neurons	0.087729	0.041947	0.03649
PRKCA	ThumbOA	Oligodendrocytes	0.05347	0.025359	0.03499	FAM153B	FingerOA	Excitatory neurons	-0.20801	0.099048	0.03572	PTPN13	HandOA	Inhibitory neurons	-0.0988	0.047245	0.03651
LRRC37A	HipOA	Pericyte	0.028083	0.013321	0.03501	ARL6IP5	KneeOA	Serotonergic-like neu	0.0445	0.0212	0.03575	DSC1	ThumbOA	Excitatory neurons	-0.05186	0.024798	0.03651
PRDX1	HandOA	Dopaminergic neuron	0.061291	0.02909	0.03512	ANKDD1	HandOA	Excitatory neurons	-0.08135	0.03874	0.03575	LANCL1	HipOA	Inhibitory neurons	0.05849	0.027979	0.03657
BORCS5	FingerOA	Excitatory neurons	0.105141	0.049907	0.03514	SETD9	HipOA	Dopaminergic neuron	0.034935	0.016638	0.03576	SMC6	HipOA	OPC/COP	-0.03853	0.018436	0.0366
ZC3H13	KneeOA	Serotonergic-like neu	-0.077	0.03657	0.03517	AC003005	HandOA	Excitatory neurons	-0.04376	0.020846	0.0358	P4HA3	HipOA	Dopaminergic neuron	0.02873	0.013745	0.0366
ECM2	FingerOA	Excitatory neurons	0.099722	0.04735	0.0352	CLEC18A	HipOA	OPC/COP	-0.03207	0.01528	0.03581	AC124657	KneeOA	Astrocytes	-0.03023	0.014465	0.03664
LINC0029	HipOA	Excitatory neurons	-0.03263	0.015493	0.03521	C10orf95	HipOA	Serotonergic-like neu	0.06969	0.033206	0.03584	AC124657	KneeOA	Excitatory neurons	-0.01744	0.008348	0.03664
PLA2G12	SpineOA	Oligodendrocytes	0.062478	0.029672	0.03524	POU5F1	ThumbOA	Excitatory neurons	0.078292	0.037314	0.03589	AC090124	KneeOA	Inhibitory neurons	-0.02244	0.010736	0.03664
MAB21L	KneeOA	Dopaminergic neuron	0.03943	0.01873	0.03524	HHEX	HipOA	Serotonergic-like neu	0.025493	0.012152	0.03592	VIPR2	SpineOA	Excitatory neurons	0.064567	0.030899	0.03665
PMEPA1	SpineOA	Microglia	0.078326	0.037203	0.03526	KLHDC10	SpineOA	Serotonergic-like neu	-0.03603	0.017175	0.03592	ZBTB32	HandOA	Astrocytes	0.077972	0.037314	0.03665
DBF4B	KneeOA	Excitatory neurons	-0.04033	0.019158	0.03527	INPP1	FingerOA	OPC/COP	-0.09354	0.044598	0.03596	WNT2B	HipOA	Excitatory neurons	-0.03585	0.017169	0.03679
DBF4B	KneeOA	Inhibitory neurons	-0.03799	0.018047	0.03527	VPS4A	KneeOA	Excitatory neurons	0.092895	0.044298	0.03599	AC097480	HandOA	Excitatory neurons	0.036132	0.017306	0.03681
DBF4B	KneeOA	Oligodendrocytes	-0.03271	0.015538	0.03527	FAM153A	ThumbOA	Inhibitory neurons	0.045266	0.021588	0.03601	LINC0236	HandOA	Excitatory neurons	0.045309	0.021701	0.03681
FAM83H	KneeOA	Excitatory neurons	-0.02359	0.011207	0.03527	FAM86C	KneeOA	Serotonergic-like neu	0.02812	0.01342	0.03609	TRIM66	KneeOA	Oligodendrocytes	0.049438	0.023681	0.03683
TTC7B	HandOA	Oligodendrocytes	0.06144	0.02943	0.03683	ZNF93	FingerOA	OPC/COP	0.063004	0.030307	0.03763	LINC0158	HandOA	Excitatory neurons	0.075556	0.03647	0.03829
DHRS7	HandOA	Excitatory neurons	-0.13005	0.062348	0.03699	SNAI3	ThumbOA	Excitatory neurons	0.150926	0.072611	0.03766	SNORC	ThumbOA	Astrocytes	-0.0524	0.025291	0.03829
ZFYVE28	ThumbOA	Oligodendrocytes	-0.0789	0.037289	0.03701	SNAI3-AS	ThumbOA	Dopaminergic neuron	-0.07328	0.035256	0.03766	BMPER	HandOA	Excitatory neurons	0.07792	0.037615	0.03831
VAMP4	SpineOA	Dopaminergic neuron	-0.04066	0.019497	0.03701	ANKRD6	HandOA	Excitatory neurons	-0.05352	0.025752	0.03769	TRIM35	HipOA	Oligodendrocytes	0.025033	0.012085	0.03832
KANSL1	ThumbOA	Inhibitory neurons	0.021812	0.010458	0.037016	FAT1	KneeOA	Oligodendrocytes	0.035336	0.017003	0.03769	TSGA10	HandOA	Excitatory neurons	-0.08091	0.039062	0.03833
AC008758	SpineOA	Inhibitory neurons	-0.04621	0.022163	0.03706	CDK10	KneeOA	Astrocytes	0.051288	0.024683	0.03772	RPL10A	HipOA	Serotonergic-like neu	0.058317	0.028156	0.03834
MFHAS1	HipOA	Astrocytes	0.065701	0.03151	0.03706	TMEM230	FingerOA	Serotonergic-like neu	-0.09615	0.046272	0.03772	ECM2	SpineOA	Astrocytes	0.064909	0.03135	0.03841
LEPR	FingerOA	Astrocytes	-0.07545	0.036186	0.03707	SCML4	ThumbOA	Excitatory neurons	-0.09228	0.044425	0.03778	TRIM66	ThumbOA	Microglia	0.066805	0.032268	0.03842
FAM229B	HandOA	Dopaminergic neuron	-0.05783	0.02774	0.03708	LINC0242	KneeOA	Astrocytes	-0.05021	0.024176	0.03781	LINC0247	ThumbOA	Oligodendrocytes	-0.06383	0.030839	0.03847
IPP	SpineOA	Serotonergic-like neu	-0.051906	0.024904	0.03714	LINC0242	KneeOA	Oligodendrocytes	-0.03269	0.015739	0.03781	SHISA9	HipOA	OPC/COP	0.031815	0.015372	0.03849
FHOD3	HipOA	Serotonergic-like neu	0.038599	0.018521	0.03716	LINC0242	KneeOA	OPC/COP	-0.02762	0.013296	0.03781	GPX7	ThumbOA	Serotonergic-like neu	-0.05143	0.024851	0.03849
STOML1	HandOA	Dopaminergic neuron	-0.10377	0.0498	0.03719	STMN4	HipOA	Oligodendrocytes	0.020397	0.009823	0.03785	CCDC57	ThumbOA	Excitatory neurons	0.120954	0.058449	0.03851
AF279873	HipOA	Excitatory neurons	0.070556	0.033874	0.03726	SNRNP25	ThumbOA	Dopaminergic neuron	-0.07893	0.038012	0.03786	MFAP3	SpineOA	Inhibitory neurons	-0.04543	0.021955	0.03854
LINC0055	HandOA	Excitatory neurons	-0.03183	0.015283	0.03727	PXYLP1	HandOA	Astrocytes	0.043669	0.021031	0.03786	DIPK1A	KneeOA	Excitatory neurons	0.06992	0.033805	0.03861
LINC0044	HandOA	Excitatory neurons	-0.02584	0.012406	0.03727	ARL17B	ThumbOA	Excitatory neurons	0.017635	0.008494	0.037869	TMPRSS7	HipOA	Excitatory neurons	-0.02137	0.010332	0.03863
NDUFV3	HandOA	Serotonergic-like neu	-0.04026	0.019333	0.03729	SFTPD	FingerOA	Serotonergic-like neu	-0.13334	0.06422	0.03787	C3orf52	HipOA	Excitatory neurons	-0.02393	0.014167	0.03863
ZNF302	FingerOA	Excitatory neurons	0.194163	0.093247	0.03732	ANAPC13	HipOA	Serotonergic-like neu	0.048133	0.023184	0.03788	TMPRSS7	HipOA	Inhibitory neurons	-0.02376	0.01149	0.03863
OR3A2	KneeOA	Excitatory neurons	0.035684	0.017139	0.03734	CPNE1	HandOA	Dopaminergic neuron	0.060107	0.028952	0.03789	PRKCB	HandOA	Microglia	-0.04688	0.02267	0.03863
GGH	SpineOA	Serotonergic-like neu	-0.07732	0.037135	0.03734	MARCHF	FingerOA	Dopaminergic neuron	-0.13726	0.066119	0.0379	TMC03	HipOA	Oligodendrocytes	0.070551	0.034117	0.03865
TCTN3	FingerOA	Serotonergic-like neu	0.131763	0.063312	0.03742	MEIOB	ThumbOA	Inhibitory neurons	0.077621	0.037395	0.03792	CKAP2	HandOA	Excitatory neurons	-0.06431	0.031106	0.03868
SETD9	HipOA	Serotonergic-like neu	0.030672	0.014738	0.03742	PM20D1	FingerOA	Oligodendrocytes	0.056895	0.027411	0.03793	CKAP2	HandOA	Inhibitory neurons	-0.04567	0.022088	0.03868
SCART1	HipOA	Excitatory neurons	-0.03625	0.01742	0.03744	NDUFSS	HipOA	Dopaminergic neuron	-0.02837	0.013672	0.03798	RPL8	HandOA	Dopaminergic neuron	0.020977	0.097204	0.03868
INPP5E	HandOA	Excitatory neurons	-0.07814	0.037552	0.03744	PTPN13	ThumbOA	OPC/COP	-0.15991	0.077072	0.03801	HLA-F	HipOA	Excitatory neurons	-0.05261	0.025447	0.03869
CUTALP	SpineOA	Serotonergic-like neu	-0.02385	0.011464	0.03748	GLTP	HipOA	Serotonergic-like neu	-0.03181	0.015333	0.03801	WDSUB1	SpineOA	Astrocytes	0.049796	0.024087	0.0387
NAPRT	FingerOA	Inhibitory neurons	0.066538	0.031992	0.03754	RPS20	KneeOA	Dopaminergic neuron	-0.0493	0.02376	0.03809	WDSUB1	SpineOA	Microglia	0.051599	0.024959	0.0387
NAPRT	FingerOA	Excitatory neurons	0.060749	0.029209	0.03754	IGSF10	HandOA	Dopaminergic neuron	0.037719	0.018188	0.038096	CCDC68	KneeOA	Excitatory neurons	-0.03723	0.018009	0.03871
MROH6	FingerOA	Excitatory neurons	0.120437	0.057907	0.03754	CDH23	KneeOA	Oligodendrocytes	0.028607	0.013799	0.03816	LRRC2	FingerOA	Excitatory neurons	-0.10021	0.048478	0.03873
NAPRT	FingerOA	Serotonergic-like neu	0.043671	0.020997	0.03754	LRWD1	KneeOA	Serotonergic-like neu	-0.0524	0.02527	0.03818	THEM6	HipOA	Excitatory neurons	0.075767	0.036662	0.03877
NAPRT	FingerOA	Dopaminergic neuron	0.058752	0.028248	0.03754	NFATC4	HipOA	Dopaminergic neuron	0.052879	0.025512	0.0382	LINC0219	HipOA	Oligodendrocytes	0.061227	0.02963	0.03879
ARFIP1	HandOA	Astrocytes	0.059223	0.028478	0.03756	HES6	FingerOA	Oligodendrocytes	0.078782	0.038009	0.0382	RAD51C	ThumbOA	Excitatory neurons	0.056842	0.027517	0.038856
ORC4	SpineOA	Excitatory neurons	0.095362	0.045858	0.03757	AC027644	HipOA	Excitatory neurons	-0.05963	0.028781	0.038284	TRAF1	SpineOA	Oligodendrocytes	0.046256	0.022396	0.03889
PTPN14	ThumbOA	Microglia	0.075155	0.03615	0.03762	LINC0220	HandOA	Excitatory neurons	0.067553	0.032607	0.03829	SHF					

RGL2	KneeOA	Excitatory neurons	0.079154	0.038334	0.03894	FHAD1	FingerOA	Microglia	0.067958	0.033045	0.03973	COP1	SpineOA	Oligodendrocytes	-0.087	0.042472	0.04052
DIS3L2	KneeOA	Oligodendrocytes	0.029227	0.014159	0.039	UBXN6	KneeOA	Dopaminergic neur	-0.0274	0.01332	0.03975	RNASEH2	ThumbOA	Excitatory neurons	0.159135	0.077687	0.04052
GSTM4	HipOA	Serotonergic-like neu	0.043306	0.02098	0.039	AC087289	FingerOA	Oligodendrocytes	0.137219	0.066743	0.03979	ZNF544	SpineOA	Serotonergic-like neu	0.056075	0.027389	0.04062
GSTM4	HipOA	Dopaminergic neuron	0.042176	0.020432	0.039	PKN2	KneeOA	Oligodendrocytes	0.046284	0.022516	0.03982	ZNF544	SpineOA	Dopaminergic neuron	0.038292	0.018703	0.04062
FRA10AC	FingerOA	Dopaminergic neuron	0.077547	0.037573	0.03903	TMEM181	HandOA	Oligodendrocytes	-0.03974	0.01933	0.03982	ENTPD6	HipOA	Serotonergic-like neu	0.070276	0.03433	0.04065
EFCAB1	HipOA	Excitatory neurons	-0.02133	0.010335	0.03903	NT5C2	HandOA	Oligodendrocytes	-0.06481	0.031532	0.03984	SPINK5	FingerOA	Serotonergic-like neu	0.079691	0.038937	0.04069
CLBA1	ThumbOA	Serotonergic-like neu	-0.11726	0.056848	0.03914	VCPKMT	FingerOA	Dopaminergic neuron	-0.10252	0.049883	0.03987	VAMP8	SpineOA	Excitatory neurons	0.063202	0.030889	0.04075
MAPK12	SpineOA	Excitatory neurons	0.074353	0.03605	0.03916	ARL17B	ThumbOA	Astrocytes	0.021215	0.010324	0.039877	TFB1M	HipOA	Astrocytes	0.045355	0.022173	0.0408
ZNF589	HandOA	Excitatory neurons	-0.05357	0.025973	0.03916	WVOX	HandOA	Excitatory neurons	0.072958	0.035508	0.03991	HLA-DRB	HandOA	Microglia	-0.06964	0.034049	0.04082
FAM66A	HipOA	Inhibitory neurons	0.047081	0.022828	0.03917	C20orf194	KneeOA	Oligodendrocytes	-0.05749	0.027984	0.03995	PRDX1	HipOA	Dopaminergic neuron	0.043493	0.021264	0.04082
FAM66A	HipOA	Oligodendrocytes	0.056741	0.027512	0.03917	CBY1	HipOA	Serotonergic-like neu	-0.04683	0.0228	0.03999	ACTR2	HandOA	Serotonergic-like neu	-0.10966	0.053626	0.04087
CCZ1	HipOA	Astrocytes	0.031221	0.01514	0.03919	TIPIN	HipOA	Serotonergic-like neu	-0.03385	0.016482	0.04	ACTR2	HandOA	Dopaminergic neuron	-0.08079	0.039508	0.04087
CCZ1	HipOA	Oligodendrocytes	0.038219	0.018533	0.03919	DCAKD	KneeOA	Dopaminergic neur	0.06156	0.02998	0.04004	ACTR2	KneeOA	Serotonergic-like n	-0.0632	0.0309	0.04088
AC055713	KneeOA	Oligodendrocytes	0.029302	0.014211	0.03921	ASAH2B	HipOA	Dopaminergic neuron	0.057469	0.027989	0.04005	ACTR2	KneeOA	Dopaminergic neur	-0.0465	0.02276	0.04088
CSGALN#	FingerOA	Oligodendrocytes	0.060337	0.029263	0.03922	CDK10	SpineOA	Astrocytes	0.073268	0.035688	0.04007	FBP1	HandOA	Serotonergic-like neu	-0.05179	0.025333	0.0409
AC023906	KneeOA	Excitatory neurons	-0.06024	0.029219	0.03925	CDK6	SpineOA	Excitatory neurons	-0.08006	0.039002	0.04009	SDCCAG8	FingerOA	Microglia	0.078424	0.038366	0.04094
SHISA9	SpineOA	OPC/COP	0.035085	0.017019	0.03925	C15orf40	SpineOA	Serotonergic-like neu	0.046432	0.022623	0.04013	MFAP3	KneeOA	Inhibitory neurons	-0.0314	0.015362	0.04095
MRPL35	ThumbOA	Serotonergic-like neu	0.071591	0.034728	0.03926	C15orf40	SpineOA	Dopaminergic neuron	0.052226	0.025446	0.04013	GALR1	HandOA	OPC/COP	0.056575	0.027692	0.04105
INPP5E	FingerOA	Excitatory neurons	-0.11229	0.054475	0.03927	CEP164	HandOA	Oligodendrocytes	-0.07591	0.036995	0.04017	AC124254	HandOA	OPC/COP	0.044709	0.021884	0.04105
PLPP2	KneeOA	Serotonergic-like n	-0.0217	0.01051	0.03927	ZNF215	SpineOA	Microglia	0.037735	0.018395	0.04023	SPECC1	ThumbOA	Astrocytes	0.147137	0.07203	0.04108
AKAP11	KneeOA	Excitatory neurons	0.069035	0.0335	0.03933	CASQ1	ThumbOA	Excitatory neurons	-0.08822	0.043007	0.04024	VRK3	FingerOA	Serotonergic-like neu	0.098339	0.048146	0.0411
FAM171A	KneeOA	Excitatory neurons	-0.04139	0.020009	0.03938	ADAM12	ThumbOA	Oligodendrocytes	-0.08371	0.040828	0.04034	LARGE2	HandOA	Serotonergic-like neu	-0.07579	0.037113	0.04113
MRLN	ThumbOA	Excitatory neurons	0.070246	0.034102	0.03941	WFDC10E	HandOA	Astrocytes	0.058803	0.028682	0.04035	ZFYVE19	KneeOA	Oligodendrocytes	0.045698	0.022379	0.04115
MED4	ThumbOA	Excitatory neurons	-0.08636	0.041926	0.03942	SNX21	HandOA	Serotonergic-like neu	-0.06246	0.030467	0.04035	MOCOS	HandOA	Microglia	-0.05287	0.025894	0.04117
MED4	ThumbOA	Oligodendrocytes	-0.0698	0.033887	0.03942	ATAD3C	SpineOA	Excitatory neurons	-0.04224	0.020607	0.04036	EFHB	KneeOA	Microglia	0.026431	0.012947	0.0412
GREB1	SpineOA	Oligodendrocytes	0.051101	0.024821	0.03952	ATAD3C	SpineOA	Oligodendrocytes	-0.04479	0.021848	0.04036	PIGZ	HandOA	OPC/COP	-0.06352	0.031114	0.04121
MRPL48	SpineOA	Excitatory neurons	0.043842	0.021308	0.03964	SLC25A38	SpineOA	Excitatory neurons	-0.06281	0.030646	0.04041	FAM182B	SpineOA	Astrocytes	0.029496	0.01445	0.04122
CDC42	ThumbOA	Serotonergic-like neu	-0.06181	0.030047	0.03966	ULK4	FingerOA	Excitatory neurons	-0.16137	0.078737	0.04042	ATG7	HipOA	Astrocytes	0.051259	0.025114	0.04124
MEF2A	ThumbOA	Microglia	0.090069	0.043783	0.03967	AC108749	FingerOA	Excitatory neurons	0.072999	0.035621	0.04043	SBF2	HandOA	Oligodendrocytes	-0.05665	0.027756	0.04125
OSGEP	HandOA	Excitatory neurons	-0.10679	0.051926	0.03972	FAM135A	HipOA	Microglia	-0.04267	0.020822	0.04044	EPB41L5	HandOA	Excitatory neurons	-0.0607	0.02974	0.04125
CIB1	SpineOA	Serotonergic-like neu	0.082849	0.040283	0.03972	FRA10AC	FingerOA	Excitatory neurons	0.083286	0.040647	0.04046	CCDC178	HipOA	Excitatory neurons	-0.05156	0.025263	0.04128
CIB1	SpineOA	Dopaminergic neuron	0.072663	0.035331	0.03972	NDUFV1	KneeOA	Oligodendrocytes	-0.053	0.02587	0.04049	MDFIC	KneeOA	Astrocytes	-0.04532	0.022212	0.04132

AHI1	SpineOA	Excitatory neurons	-0.07025	0.034435	0.04135
AHI1	SpineOA	Inhibitory neurons	-0.06001	0.029419	0.04135
MTFR1	ThumbOA	Oligodendrocytes	-0.089	0.04363	0.04137
DBN1	HandOA	Dopaminergic neuron	0.051768	0.025382	0.04139
ANTXR1	HipOA	Astrocytes	-0.09305	0.045624	0.04141
AC104662	HipOA	Excitatory neurons	0.039495	0.019373	0.04149
RAB3B	KneeOA	Dopaminergic neur	-0.0476	0.023335	0.04153
CYB5A	KneeOA	Excitatory neurons	-0.03921	0.01924	0.04158
INPP1	FingerOA	Oligodendrocytes	-0.12864	0.063147	0.04164
PTPN12	HandOA	Excitatory neurons	0.061762	0.030329	0.04171
PTPN12	HandOA	Inhibitory neurons	0.043183	0.021205	0.04171
PTPN12	HandOA	OPC/COP	0.066854	0.032829	0.04171
BCCIP	ThumbOA	Excitatory neurons	0.103801	0.050973	0.04171
COL16A1	KneeOA	Astrocytes	-0.04791	0.023531	0.04174
COL16A1	KneeOA	Oligodendrocytes	-0.02713	0.013322	0.04174
COL16A1	KneeOA	OPC/COP	-0.03912	0.019214	0.04174
SIDT2	ThumbOA	Serotonergic-like neu	-0.08474	0.04162	0.04175
IFI27L2	HipOA	Dopaminergic neuron	0.034283	0.021684	0.04177
AXDND1	HipOA	Astrocytes	-0.04908	0.024111	0.04178
NTSC2	FingerOA	Oligodendrocytes	-0.08912	0.043781	0.0418
PDE4B	SpineOA	Oligodendrocytes	-0.12813	0.062978	0.0419
OR3A2	HipOA	Excitatory neurons	0.044428	0.021837	0.0419
PILRB	SpineOA	Serotonergic-like neu	0.023133	0.01137	0.0419
AC087280	HipOA	Inhibitory neurons	-0.03881	0.019076	0.04192
AL137246	KneeOA	Excitatory neurons	0.03672	0.01805	0.04192
MED4	ThumbOA	Serotonergic-like neu	0.102704	0.050498	0.04197
VAMP4	FingerOA	Oligodendrocytes	-0.11874	0.058383	0.04197
SESTD1	KneeOA	Excitatory neurons	-0.02687	0.013214	0.04198
XPNPEP2	KneeOA	Serotonergic-like n	-0.0422	0.02075	0.04198
CUTA	HipOA	Serotonergic-like neu	-0.05203	0.025587	0.04202
C12orf60	FingerOA	Inhibitory neurons	-0.07173	0.035291	0.04209
C12orf60	FingerOA	Excitatory neurons	-0.06379	0.031382	0.04209

STK31	FingerOA	Oligodendrocytes	-0.03931	0.019348	0.04216
FAM221A	FingerOA	Oligodendrocytes	-0.03389	0.01668	0.04216
SMIM19	FingerOA	Serotonergic-like neu	-0.06855	0.033741	0.04218
SFTPD	HandOA	Serotonergic-like neu	-0.10637	0.052362	0.04221
VAMP4	FingerOA	Serotonergic-like neu	-0.05734	0.028231	0.04224
FGL1	SpineOA	Astrocytes	0.047968	0.023619	0.04226
ODF2L	HandOA	Oligodendrocytes	-0.05288	0.02604	0.04227
ARSA	HipOA	Dopaminergic neuron	-0.05062	0.024926	0.04227
PMF1-BG1	KneeOA	Oligodendrocytes	0.027209	0.013402	0.04233
SMG5	KneeOA	Oligodendrocytes	-0.03982	0.019615	0.04233
GATM	KneeOA	Serotonergic-like n	-0.0413	0.02032	0.04233
BMPER	FingerOA	Excitatory neurons	0.110695	0.054528	0.04235
TEN1	HandOA	Dopaminergic neuron	0.064325	0.031688	0.04236
CDC14A	SpineOA	Microglia	-0.05887	0.029008	0.04241
LMF1	ThumbOA	Excitatory neurons	0.097757	0.048176	0.04244
TESK2	ThumbOA	Astrocytes	-0.05875	0.028957	0.04248
FOCAD	FingerOA	Excitatory neurons	0.14039	0.069199	0.04248
CSGALN#	HandOA	OPC/COP	0.04863	0.023974	0.04251
INTU	ThumbOA	Serotonergic-like neu	0.105098	0.051819	0.042541
BDNF-AS	HandOA	Dopaminergic neuron	-0.0781	0.03851	0.04255
C10orf95	HipOA	Dopaminergic neuron	0.046521	0.022949	0.04265
GFPT2	HandOA	Serotonergic-like neu	0.050638	0.024998	0.0428
ASTN2	SpineOA	Oligodendrocytes	-0.06163	0.030426	0.04282
TSGA10	KneeOA	Excitatory neurons	-0.0461	0.022762	0.04284
STMN4	SpineOA	Oligodendrocytes	0.022097	0.010912	0.04286
TNIK	ThumbOA	Oligodendrocytes	0.034755	0.017165	0.042889
TAF1B	SpineOA	Serotonergic-like neu	0.053528	0.026438	0.0429
GGCT	HandOA	Excitatory neurons	0.149884	0.074032	0.04291
MAP2K5	HandOA	Inhibitory neurons	-0.06453	0.031874	0.04292
MAP2K5	HandOA	Microglia	-0.05778	0.028538	0.04292
PPP1R21	HandOA	Oligodendrocytes	0.073838	0.036474	0.04293
PARK7	KneeOA	Dopaminergic neur	-0.0363	0.01795	0.04295

MAP2K5	HandOA	Astrocytes	-0.07414	0.036635	0.04299
AC116366	HandOA	Astrocytes	0.113497	0.056089	0.04302
AC116366	HandOA	Oligodendrocytes	0.089917	0.044436	0.04302
AC007040	HipOA	Inhibitory neurons	-0.03846	0.01901	0.04305
LEKR1	SpineOA	Inhibitory neurons	-0.0364	0.017997	0.0431
AC100814	KneeOA	Excitatory neurons	-0.04938	0.024414	0.04311
ARHGEF7	ThumbOA	Oligodendrocytes	0.090919	0.044961	0.04316
C1GALT1	ThumbOA	OPC/COP	-0.08211	0.040608	0.04317
CCDC91	HandOA	Dopaminergic neuron	0.073688	0.036444	0.04318
C1orf174	ThumbOA	Dopaminergic neuron	0.087727	0.043395	0.04322
NALCN	KneeOA	Astrocytes	0.046194	0.022851	0.04323
ANKRD26	KneeOA	Excitatory neurons	0.056688	0.028054	0.04331
LINC0251	ThumbOA	Excitatory neurons	0.077454	0.038339	0.04336
CDK10	SpineOA	Excitatory neurons	0.074209	0.036737	0.04338
FKRP	HandOA	Inhibitory neurons	-0.07274	0.03602	0.04343
SPINK9	SpineOA	Inhibitory neurons	-0.05118	0.025343	0.04345
FREM2	FingerOA	Oligodendrocytes	0.076251	0.037763	0.04347
FREM2	FingerOA	Serotonergic-like neuron	0.08836	0.043761	0.04347
FIGN	KneeOA	Inhibitory neurons	0.058427	0.028943	0.04352
ZNF623	FingerOA	Excitatory neurons	-0.08785	0.043535	0.04361
FAM149A	FingerOA	Serotonergic-like neuron	0.117035	0.058001	0.04361
SAMD5	SpineOA	Excitatory neurons	-0.07857	0.038944	0.04363
CNKSR1	KneeOA	OPC/COP	0.033106	0.016409	0.04364
CERS4	FingerOA	Serotonergic-like neuron	-0.13444	0.066639	0.04365
TEN1	SpineOA	Dopaminergic neuron	0.053646	0.026595	0.04368
ZNF37A	FingerOA	Serotonergic-like neuron	-0.0902	0.044727	0.04372
C17orf100	HipOA	Oligodendrocytes	-0.02182	0.010818	0.04372
PFKP	ThumbOA	Serotonergic-like neuron	-0.08264	0.040984	0.04375
SLC22A18	FingerOA	Excitatory neurons	-0.11292	0.055999	0.04376
AC090124	HipOA	Excitatory neurons	-0.0243	0.010252	0.04378
AC124657	HipOA	Inhibitory neurons	-0.02432	0.012063	0.04378
ARL14EP	SpineOA	Excitatory neurons	-0.0681	0.033778	0.04379

SERPIND1	ThumbOA Astrocytes	-0.11909	0.059068	0.04379	AGA	HandOA	Excitatory neurons	0.056032	0.027894	0.04456	DNAJC15	ThumbOA Inhibitory neurons	-0.04477	0.02235	0.04518		
NPIP13	ThumbOA Astrocytes	0.084875	0.042111	0.04385	AGA	HandOA	Oligodendrocytes	0.068771	0.034235	0.04456	DNAJC15	ThumbOA Microglia	-0.06841	0.034154	0.04518		
NPIP13	ThumbOA Inhibitory neurons	0.114464	0.056791	0.04385	VAMP4	HandOA	Oligodendrocytes	-0.08082	0.040232	0.04456	DNAJC15	ThumbOA Serotonergic-like neu	-0.02954	0.014746	0.04518		
NPIP13	ThumbOA Microglia	0.068702	0.034087	0.04385	KLHL1	KneeOA	OPC/COP	0.019978	0.009946	0.04458	DNAJC15	ThumbOA Dopaminergic neuron	-0.03303	0.01649	0.04518		
NPIP13	ThumbOA Oligodendrocytes	0.054864	0.027221	0.04385	PIK3R3	HipOA	Serotonergic-like neu	0.040442	0.020138	0.04462	PADI2	KneeOA	Serotonergic-like neu	0.02617	0.01306	0.04519	
NPIP13	ThumbOA OPC/COP	0.087096	0.043213	0.04385	SEN2	HandOA	Serotonergic-like neu	-0.09291	0.046269	0.04464	FADS1	HandOA	Oligodendrocytes	0.069509	0.034711	0.04523	
NPIP13	ThumbOA Excitatory neurons	0.128144	0.063579	0.04385	SEN2	HandOA	Dopaminergic neuron	-0.05818	0.028974	0.04464	FADS2	HandOA	Oligodendrocytes	0.063233	0.031577	0.04523	
FBP1	HandOA	Dopaminergic neuron	-0.07556	0.037499	CCNY	KneeOA	Excitatory neurons	-0.06617	0.032951	0.04464	LINC0129	FingerOA	Oligodendrocytes	-0.06788	0.033902	0.04525	
VRK3	HandOA	Serotonergic-like neu	0.067804	0.033657	0.04395	HFM1	SpineOA	Inhibitory neurons	-0.04956	0.024681	0.04464	AC124657	SpineOA	Astrocytes	-0.04093	0.020444	0.04529
CD164	KneeOA	Serotonergic-like neu	0.040497	0.02034	0.04401	ARHGAP2	HandOA	Inhibitory neurons	0.048308	0.024057	0.04464	AC124657	SpineOA	Excitatory neurons	-0.02362	0.011798	0.04529
TOR3A	ThumbOA	Serotonergic-like neu	-0.09026	0.044831	0.04409	ARHGAP2	HandOA	OPC/COP	-0.05564	0.027708	0.04464	AC090124	SpineOA	Inhibitory neurons	-0.03038	0.015173	0.04529
OR2G6	HipOA	Excitatory neurons	0.048876	0.024278	0.0441	LRRC57	HipOA	Excitatory neurons	0.054742	0.027268	0.04469	CPSF1	SpineOA	Oligodendrocytes	0.055058	0.027502	0.04529
CXCL11	HandOA	Dopaminergic neuron	-0.04094	0.020337	0.04412	GPR171	SpineOA	Astrocytes	-0.03668	0.018269	0.0447	SFI1	HipOA	Oligodendrocytes	0.046856	0.02341	0.04534
MUTYH	KneeOA	Serotonergic-like neu	0.03096	0.01538	0.04412	GPR171	SpineOA	Excitatory neurons	-0.0305	0.015191	0.0447	TNKS	HipOA	Oligodendrocytes	-0.04337	0.021672	0.04536
SNUPN	KneeOA	Serotonergic-like neu	-0.0514	0.02552	0.04413	GPR171	SpineOA	OPC/COP	-0.04758	0.023703	0.0447	DGCR6	FingerOA	Serotonergic-like neu	-0.07063	0.035301	0.0454
TBCK	KneeOA	Dopaminergic neuron	-0.0396	0.01966	0.04413	GPR171	SpineOA	Serotonergic-like neu	-0.01894	0.009436	0.0447	DGCR6	FingerOA	Dopaminergic neuron	-0.05391	0.026945	0.0454
CNOT6L	FingerOA	Dopaminergic neuron	0.040065	0.019907	0.04416	CAT	KneeOA	Endothelial cells	0.029506	0.014704	0.04479	METTL22	HandOA	Excitatory neurons	-0.08746	0.043713	0.04543
ZNF420	SpineOA	Excitatory neurons	0.057597	0.02862	0.04417	GOLGA6L	FingerOA	OPC/COP	-0.08644	0.043082	0.04481	IL10RB-D	HipOA	Serotonergic-like neu	-0.06474	0.032372	0.04553
ART3	FingerOA	Oligodendrocytes	0.10205	0.050713	0.04419	SLC25A24	KneeOA	OPC/COP	0.028988	0.014449	0.04483	FREM2	HandOA	Oligodendrocytes	0.050783	0.0254	0.04557
GNB2	FingerOA	Serotonergic-like neu	-0.21758	0.108174	0.04428	MAP2K5	HandOA	Excitatory neurons	-0.06932	0.034551	0.04483	FREM2	HandOA	Serotonergic-like neu	0.058848	0.029434	0.04557
SNX32	HipOA	Dopaminergic neuron	-0.03479	0.0173	0.04432	MAP2K5	HandOA	Oligodendrocytes	-0.0598	0.029807	0.04483	AC007040	HipOA	Excitatory neurons	-0.02607	0.01304	0.04558
FBX07	HandOA	OPC/COP	-0.03173	0.015781	0.04439	PLGLB2	FingerOA	Excitatory neurons	-0.11288	0.056274	0.04487	STK33	KneeOA	OPC/COP	-0.02323	0.011621	0.04559
ASB18	HipOA	Excitatory neurons	-0.03279	0.016311	0.04439	AC007405	HipOA	Astrocytes	-0.03241	0.016164	0.04493	CYP27A1	HandOA	Microglia	0.037326	0.018671	0.04559
YLP1	ThumbOA	Oligodendrocytes	-0.07833	0.038963	0.0444	LTBP1	HipOA	Oligodendrocytes	0.036384	0.018145	0.04495	TTL4	HandOA	Microglia	0.038087	0.019052	0.04559
PIK3R3	HandOA	Serotonergic-like neu	0.055074	0.027402	0.04445	AL121656	HipOA	Oligodendrocytes	0.040367	0.020132	0.04495	GMDS	ThumbOA	Serotonergic-like neu	0.086373	0.043208	0.04561
AC091078	HandOA	Excitatory neurons	0.054899	0.027322	0.0445	CSGALN2	ThumbOA	Oligodendrocytes	0.055309	0.027588	0.04498	ARL17B	ThumbOA	OPC/COP	0.017462	0.008736	0.045619
AC110023	HandOA	Excitatory neurons	0.059208	0.029466	0.0445	SLC35F1	HandOA	Dopaminergic neuron	0.078226	0.039026	0.04502	COG4	KneeOA	Dopaminergic neuron	0.04747	0.02375	0.04566
ZNF135	SpineOA	Astrocytes	-0.04937	0.024572	0.0445	PHGDH	HipOA	Oligodendrocytes	0.079065	0.039448	0.04504	AP006621	FingerOA	Astrocytes	0.082336	0.041202	0.04568
ZNF135	SpineOA	Oligodendrocytes	-0.06093	0.030325	0.0445	AQR	HipOA	Oligodendrocytes	0.036377	0.01816	0.04516	EPS15L1	FingerOA	Oligodendrocytes	0.080077	0.040075	0.0457
RAB3C	HandOA	Excitatory neurons	-0.09365	0.046613	0.04452	FLOT1	SpineOA	Inhibitory neurons	-0.05379	0.026855	0.045165	HSD17B4	KneeOA	Inhibitory neurons	0.04791	0.023982	0.04574
LMO7DN	HandOA	Excitatory neurons	0.071296	0.035487	0.04453	PABPC1L	ThumbOA	OPC/COP	-0.07087	0.035382	0.04517	ZNF534	SpineOA	Excitatory neurons	-0.06148	0.030783	0.04579
PEX13	HandOA	Dopaminergic neuron	0.066843	0.033274	0.04455	STAP2	ThumbOA	Serotonergic-like neu	0.046818	0.023374	0.04518	PPAT	KneeOA	Excitatory neurons	-0.03469	0.017371	0.04581
LINC0223	KneeOA	Microglia	-0.03459	0.01732	0.04584	ZC3H8	FingerOA	Dopaminergic neuron	0.104336	0.052339	0.04621	CD151	HandOA	Astrocytes	0.061963	0.031202	0.04705
C17orf97	HipOA	Excitatory neurons	-0.03184	0.015943	0.04585	EFCAB6	SpineOA	Excitatory neurons	0.089232	0.044769	0.04624	LINC0063	SpineOA	Excitatory neurons	-0.04145	0.020873	0.04708
C17orf97	HipOA	Inhibitory neurons	-0.03595	0.018002	0.04585	TEX9	ThumbOA	Serotonergic-like neu	0.131154	0.065807	0.04626	KANSL1	ThumbOA	Microglia	0.02569	0.01294	0.047103
NHERF2	ThumbOA	Dopaminergic neuron	0.109079	0.05464	0.0459	TAB2	SpineOA	Astrocytes	0.040019	0.020087	0.04634	LINC0148	SpineOA	Excitatory neurons	0.074522	0.037539	0.04712
LRRC37A	ThumbOA	Microglia	0.027745	0.013898	0.045901	AL031056	SpineOA	Astrocytes	0.040754	0.020456	0.04634	FAM200F	KneeOA	Dopaminergic neuron	-0.041	0.02064	0.04713
ZNF589	KneeOA	Inhibitory neurons	-0.03912	0.019595	0.04591	GATM	HipOA	Oligodendrocytes	-0.03475	0.017442	0.04634	STYXL1	KneeOA	Excitatory neurons	-0.04531	0.022825	0.04714
ZNF589	KneeOA	Oligodendrocytes	-0.04017	0.020123	0.04591	PRPH2	ThumbOA	Serotonergic-like neu	-0.04111	0.020634	0.04636	CPNE1	HandOA	Serotonergic-like neu	0.0224	0.011288	0.047208
PLEKHH2	HipOA	Oligodendrocytes	-0.03221	0.016137	0.04592	ENDOD1	KneeOA	Oligodendrocytes	-0.03568	0.017914	0.04638	ST8SIA1	KneeOA	Astrocytes	-0.03147	0.015862	0.04722
SDC4	SpineOA	Serotonergic-like neu	0.045677	0.022883	0.04592	CTSC	HipOA	Serotonergic-like neu	-0.04293	0.021552	0.0464	TCEA3	SpineOA	Serotonergic-like neu	-0.0736	0.037095	0.04725
TTF2	SpineOA	Excitatory neurons	0.055927	0.028024	0.04597	PCBP3	ThumbOA	Astrocytes	-0.05578	0.028009	0.04641	ALDH9A1	HandOA	Oligodendrocytes	-0.06567	0.033123	0.04742
TTF2	SpineOA	Serotonergic-like neu	0.0529	0.026508	0.04597	AL391095	FingerOA	Astrocytes	0.068831	0.03456	0.04641	D2HGDH	SpineOA	Dopaminergic neuron	-0.07005	0.035338	0.04743
F11	FingerOA	Astrocytes	0.077304	0.038739	0.04599	AL391095	FingerOA	Inhibitory neurons	0.05949	0.02987	0.04641	AL450332	KneeOA	Astrocytes	-0.03255	0.016421	0.04745
STX19	HipOA	Oligodendrocytes	-0.03501	0.017544	0.046	ARFIP1	HandOA	Oligodendrocytes	0.056449	0.028348	0.04645	AC104964	KneeOA	Excitatory neurons	0.033613	0.016961	0.0475
DHFR2	HipOA	Oligodendrocytes	-0.04696	0.023533	0.046	SMAD7	KneeOA	Oligodendrocytes	-0.03163	0.015885	0.04645	NALCN	HandOA	Astrocytes	0.077605	0.03916	0.04751
TMEM181	KneeOA	Oligodendrocytes	-0.02264	0.011347	0.046	PIGP	HandOA	Serotonergic-like neu	-0.03286	0.016504	0.0465	FREM2	ThumbOA	Astrocytes	0.043242	0.021826	0.04757
DPP7	HandOA	Excitatory neurons	0.14398	0.07216	0.04601	CCDC68	HandOA	Excitatory neurons	-0.06149	0.030895	0.04655	AXDND1	KneeOA	Astrocytes	-0.03757	0.018968	0.0476
PURG	SpineOA	Oligodendrocytes	0.037968	0.019033	0.04606	PARK7	HipOA	Serotonergic-like neu	-0.03466	0.017418	0.04658	SLFN5	SpineOA	Oligodendrocytes	0.049043	0.024758	0.0476
KANSL1	ThumbOA	Dopaminergic neuron	0.055478	0.027812	0.04607	UBA52	FingerOA	Serotonergic-like neu	0.120485	0.060542	0.04658	HADHB	HipOA	Serotonergic-like neu	-0.05282	0.026667	0.04762
C9orf72	SpineOA	Excitatory neurons	0.038909	0.019506	0.04607	SLC9C2	FingerOA	Excitatory neurons	-0.0963	0.048388	0.04658	LINC0021	KneeOA	Serotonergic-like neu	0.04273	0.02157	0.04762
C9orf72	SpineOA	Inhibitory neurons	0.038878	0.01949	0.04607	KANSL1	ThumbOA	Pericyte	0.022122	0.011118	0.04661	CD46	KneeOA	OPC/COP	-0.03274	0.01653	0.04764
RGPD8	ThumbOA	Astrocytes	-0.09259	0.046419	0.04609	TMBIM6	KneeOA	Dopaminergic neuron	-0.0659	0.03313	0.04662	AL359317	HandOA	Excitatory neurons	-0.15331	0.077429	0.0477
RGPD8	ThumbOA	Excitatory neurons	-0.10629	0.053291	0.04609	LINC0223	FingerOA	Microglia	-0.08647	0.043458	0.04663	PILRB	SpineOA	Astrocytes	0.030355	0.015331	0.04771
RGPD8	ThumbOA	Oligodendrocytes	-0.05864	0.029402	0.04609	TARSL2	ThumbOA	Excitatory neurons	-0.09116	0.045842	0.04675	PILRB	SpineOA	Excitatory neurons	0.02891	0.014601	0.04771
GOLGA6L	HandOA	OPC/COP	-0.05899	0.029576	0.04611	CD200	ThumbOA	Serotonergic-like neu	-0.08884	0.04468	0.04678	PILRA	SpineOA	Excitatory neurons	0.049693	0.025098	0.04771
SPATA1	FingerOA	Excitatory neurons	0.092585	0.046423	0.04611	UQCCL1	ThumbOA	Serotonergic-like neu	0.119287	0.060006	0.04682	PILRB	SpineOA	Inhibitory neurons	0.035314	0.017836	0.04771
SPATA1	FingerOA	Inhibitory neurons	0.110424	0.055368	0.04611	SMC2	SpineOA	Oligodendrocytes	0.049948	0.025128	0.04684	COL6A2	KneeOA	Astrocytes	0.02573	0.012998	0.047766
STOML1	FingerOA	Dopaminergic neuron	-0.14434	0.072382	0.04614	KIF5B	FingerOA	Serotonergic-like neu	-0.18698	0.09409	0.04689	LRRC37A	ThumbOA	Inhibitory neurons	0.025036	0.012649	0.047784
VAMP4	HandOA	Dopaminergic neuron	-0.04678	0.02346	0.04615	LINC0195	HandOA	Astrocytes	0.035717	0.017978	0.04696	BTBD9	HandOA	Serotonergic-like neu	-0.03096	0.015641	0.04779
NDUF55	HipOA	Serotonergic-like neu	-0.02069	0.010375	0.04616	NLRP4	FingerOA	Microglia	0.056126	0.028253	0.04697	TMEM25	KneeOA	Serotonergic-like neu	-0.0223	0.01127	0.04782
FAM184B	SpineOA	Astrocytes	0.063348	0.031772	0.04617	TRIM66	ThumbOA	Astrocytes	0.082651	0.041607	0.04698	C2CD4C	ThumbOA	Serotonergic-like neu	0.117089	0.059169	0.04783
TRPS1	KneeOA	Oligodendrocytes	-0.0302	0.011551	0.04619	TRIM66	ThumbOA	OPC/COP	0.063844	0.032139	0.04698	AC027644	KneeOA	Excitatory neurons	-0.04461	0.022546	0.047845
DPP7	FingerOA	Excitatory neurons	0.173554	0.087057	0.0462	DHDH	SpineOA	Dopaminergic neuron	0.038119	0.019193	0.04702	SNRPA1	KneeOA	Excitatory neurons	0.090805	0.045903	0.04791

RGS14	FingerOA	Excitatory neurons	0.114086	0.057683	0.04795
RGS14	FingerOA	Serotonergic-like neu	0.044637	0.022569	0.04795
RGS14	FingerOA	Dopaminergic neuron	0.043179	0.021832	0.04795
GPX7	KneeOA	Serotonergic-like neu	-0.0207	0.01048	0.04803
ZP3	HandOA	Dopaminergic neuron	-0.02313	0.0117	0.04805
JAK1	SpineOA	Excitatory neurons	0.048686	0.024629	0.04807
VAMP4	FingerOA	Dopaminergic neuron	-0.06742	0.034111	0.04811
TBX10	KneeOA	Serotonergic-like neu	-0.0339	0.01715	0.04821
FRA10AC	FingerOA	Astrocytes	0.070006	0.035446	0.04827
AIFM2	HandOA	Excitatory neurons	0.043664	0.022109	0.04828
SAR1A	HandOA	Serotonergic-like neu	0.040561	0.020539	0.04828
FAM3B	ThumbOA	Microglia	-0.06228	0.031539	0.04832
NBPF3	HandOA	Oligodendrocytes	-0.03721	0.018846	0.04833
C17orf100	ThumbOA	Oligodendrocytes	-0.04031	0.020419	0.04835
SLC12A4	HandOA	Serotonergic-like neu	0.096896	0.049081	0.04836
RAB3C	HipOA	Dopaminergic neuron	-0.05031	0.025485	0.04837
ANKRD55	FingerOA	Excitatory neurons	0.070477	0.035701	0.04837
PPhLN1	KneeOA	Microglia	0.02938	0.014883	0.04838
AC100814	FingerOA	Excitatory neurons	-0.11892	0.060241	0.04838
AC008014	HandOA	Microglia	0.037384	0.018939	0.04839
AC008014	HandOA	Astrocytes	0.047062	0.023842	0.04839
AC008014	HandOA	Inhibitory neurons	0.059171	0.029976	0.04839
AC008014	HandOA	OPC/COP	0.038251	0.019378	0.04839
ADNP	ThumbOA	Dopaminergic neuron	-0.08563	0.043384	0.0484
TMEM50	KneeOA	Serotonergic-like neu	0.02804	0.01421	0.0484
XKR6	KneeOA	Inhibitory neurons	0.073549	0.037282	0.04852
UQCC1	FingerOA	Serotonergic-like neu	0.125547	0.063676	0.04865
NPIP2	KneeOA	Microglia	-0.02464	0.012496	0.04867
NPIP2	KneeOA	Oligodendrocytes	-0.01537	0.007795	0.04867
NPIP2	KneeOA	Astrocytes	-0.01653	0.008387	0.04867
NPIP2	KneeOA	Excitatory neurons	-0.0186	0.009432	0.04867
NPIP2	KneeOA	Inhibitory neurons	-0.02102	0.010661	0.04867

PRPH2	FingerOA	Serotonergic-like neu	0.042746	0.021684	0.04869
UBE2Q2	KneeOA	Dopaminergic neuron	-0.0345	0.01751	0.04872
NLRP2	SpineOA	Inhibitory neurons	-0.04533	0.022999	0.04875
CNKSR1	KneeOA	Excitatory neurons	0.022842	0.011591	0.04876
CNKSR1	KneeOA	Oligodendrocytes	0.027791	0.014102	0.04876
ZNF593	KneeOA	Dopaminergic neuron	-0.0201	0.01022	0.04876
CNKSR1	KneeOA	Inhibitory neurons	0.034125	0.017316	0.04876
NQO2	FingerOA	Inhibitory neurons	-0.09172	0.046541	0.04876
RNF170	ThumbOA	Oligodendrocytes	-0.12476	0.063338	0.04886
RSU1	ThumbOA	Oligodendrocytes	0.122182	0.062044	0.04892
RPTOR	SpineOA	Oligodendrocytes	-0.05465	0.027755	0.04897
NDUFB3	HandOA	Dopaminergic neuron	-0.05973	0.030339	0.04897
COLGAL1	HipOA	Dopaminergic neuron	-0.03095	0.015725	0.04903
ZP3	FingerOA	Serotonergic-like neu	-0.03675	0.018672	0.04907
SNX19	KneeOA	Endothelial cells	-0.01685	0.008566	0.04913
TFB1M	HipOA	Serotonergic-like neu	-0.03821	0.019419	0.04913
ZNF814	HandOA	Dopaminergic neuron	0.092222	0.046878	0.04915
ZNF587	HandOA	Dopaminergic neuron	0.058931	0.029956	0.04915
FBXO7	FingerOA	Oligodendrocytes	-0.07078	0.035984	0.04919
GPR146	HipOA	OPC/COP	-0.04158	0.021142	0.0492
SLC9C2	HandOA	Excitatory neurons	-0.06452	0.032802	0.0492
MVB12B	KneeOA	Inhibitory neurons	0.038506	0.019578	0.0492
SUPT3H	FingerOA	Oligodendrocytes	0.091142	0.046349	0.04925
AC113137	HandOA	Excitatory neurons	-0.0416	0.021155	0.04926
G3BP2	HandOA	Dopaminergic neuron	0.066954	0.034052	0.04927
MDH1B	HandOA	Excitatory neurons	-0.04189	0.021308	0.04928
G3BP2	HandOA	Serotonergic-like neu	0.069906	0.035558	0.0493
ZNF556	KneeOA	Microglia	0.029287	0.014898	0.04932
FAM86C1	SpineOA	Serotonergic-like neu	0.036319	0.018475	0.04932
CD46	KneeOA	Oligodendrocytes	-0.03008	0.015305	0.04933
PARK7	HipOA	Dopaminergic neuron	-0.04511	0.022955	0.04938
SHTN1	SpineOA	Oligodendrocytes	0.068803	0.03501	0.04939

CEP104	HipOA	Excitatory neurons	0.047968	0.024414	0.04944
ZNRF3-AS1	ThumbOA	Serotonergic-like neu	-0.11163	0.056818	0.04945
UBC	FingerOA	Dopaminergic neuron	-0.0841	0.042806	0.04946
AC012511	SpineOA	Oligodendrocytes	0.047463	0.02417	0.04956
EV15L	KneeOA	OPC/COP	0.038289	0.019499	0.04957
TMEM97	ThumbOA	Dopaminergic neuron	0.076088	0.03875	0.04958
TMEM452	ThumbOA	Serotonergic-like neu	-0.04401	0.022415	0.04958
LTF	KneeOA	Astrocytes	0.027756	0.014136	0.04959
NARF	HipOA	Excitatory neurons	0.084555	0.043066	0.0496
LINC0111	HipOA	Astrocytes	-0.04468	0.02276	0.04961
LINC0111	HipOA	OPC/COP	-0.03141	0.016001	0.04961
FBXO7	HandOA	Oligodendrocytes	-0.04866	0.024786	0.04962
LNP1	HandOA	Serotonergic-like neu	-0.06312	0.032157	0.04967
FAF1	FingerOA	Dopaminergic neuron	0.152969	0.077938	0.04968
FAM114A	KneeOA	Excitatory neurons	0.024903	0.012689	0.0497
TMEM12	KneeOA	Serotonergic-like neu	0.03572	0.01821	0.04975
LINC0063	HandOA	Excitatory neurons	-0.04993	0.02545	0.04976
ZNF304	ThumbOA	Excitatory neurons	-0.1097	0.05591	0.04976
TXNL4A	ThumbOA	Dopaminergic neuron	-0.21832	0.111277	0.04977
PNLDC1	HandOA	Oligodendrocytes	0.072155	0.03679	0.04985
SHMT1	KneeOA	Excitatory neurons	0.039031	0.019903	0.04987
TXNL4B	HipOA	Astrocytes	0.028905	0.01474	0.04988
TXNL4B	HipOA	OPC/COP	0.031326	0.015974	0.04988
FAH	FingerOA	Pericyte	-0.04978	0.025391	0.04991
INVS	KneeOA	Oligodendrocytes	0.02687	0.013707	0.04996
PHLDB3	ThumbOA	Excitatory neurons	-0.07976	0.040688	0.04996
EFCAB13	HandOA	Excitatory neurons	0.077283	0.039424	0.04996
MAPT	HandOA	Astrocytes	0.03805	0.019411	0.049974