

Sirt3 WT, KO mice_Plasma

metabolites	plasma_WT 1	plasma_WT 2	plasma_WT 3	plasma_KO 1	plasma_KO 2	plasma_KO 3
(R)-(+)-2-Pyrrolidone-5-carboxylic acid	981689.8	740929.1	597636.6	827441.8	1302559	884066.4
2-aminobutyrate	18572.57	8498.451	18365.7	14283.07	18784.03	22759.8
2-Aminooctanoic acid	7970.539	13557.13	14066.35	6698.884	8727.81	6385.055
2-Deoxy-D-ribose	5336.591	3087.864	2250.485	3655.814	4413.024	3542.238
2-hydroxyglutarate	32037.21	33936.06	36561.33	30889.48	40818.45	66485.2
2-Hydroxyoctanoic acid	307307.9	204568	185908.5	230527.8	116341.1	47354.34
2-Hydroxyvaleric acid	6908612	7073862	4715512	7547394	8104358	1.13E+07
2-Ketobutyric acid	595345	513255.9	709648.7	790627	780862.6	600780
2-Methylglutaric acid	22403.78	21292.95	28679.31	26649.13	36700.86	22111.96
2-Oxoisopentanoic acid	2.22E+07	1.50E+07	1.45E+07	1.56E+07	1.65E+07	1.29E+07
2-Phenylbutyric acid	5222.349	5206.839	3354.736	3272.917	4124.601	1757.602
2-Phenylpropionic acid	170657.1	867087.9	3312667	1729358	464813.9	1618513
3-hydroxybutyrate	3414949	2425834	8493655	5641362	1788991	2236415
3-Hydroxypropionic Acid	8.73E+07	8.43E+07	1.21E+08	9.34E+07	8.99E+07	1.04E+08
3-Indolepropionic acid	46119.8	152852.6	364156.4	253171.6	276924.4	179899.3
3-Methylglutaconic Acid	3127156	3269167	4441882	3891341	4956022	4033912
3-Methylglutaric acid	22403.78	21292.95	28679.31	26649.13	36700.86	22111.96
3-ureidopropionate	60602.09	22140.59	74810.32	20846.96	138350.2	58364.27
4-aminobutyrate	15521.34	12943.37	15642.12	10694.3	22999.26	25867.58
4-Methylvaleric acid	372349	293259.3	360061.5	291882.7	262454.2	221000.5
5-aminovaleric acid	3676734	2416428	5523448	2972951	3326575	4443042
5-Keto-D-gluconic acid	40092.96	24246.65	49544.16	40983.34	64116.92	46635.15
acetoacetate	508817.1	379775.3	494877.9	494872	511233.5	341249.7
aconitate	761241.2	675509.9	963807.5	955910.3	968031.2	1290576
adenine	4471.119	7307.705	5241.461	6360.908	6110.658	0
Adipic acid	22403.78	21292.95	28679.31	26649.13	36700.86	22111.96
Adonitol	15258.62	14074.81	21860.8	15580.86	17861.51	29033.67
a-ketoglutarate	411904.8	403442.5	452343.6	354728.4	532587.5	243364.2
alanine	3354392	2171773	2900068	2062373	2904945	3163339
allantoin	3287502	1776844	3431524	1784155	2937535	3173449
Amino adipic acid	33195.18	18256.22	27936.79	27879.93	51269.62	33554.42
Aminolevulinic acid	34139.29	24047.79	29226.17	24282.24	64939.5	59450.86
anserine	126141.5	94684.29	98899.78	62323.64	91124.35	117331.9
arginine	209944.8	103903.3	192029	306618.3	492402	421029.8
asparagine	327341.5	226893.3	369730.3	209981.3	369249.6	500200
aspartate	70198.07	47149.04	39740.59	61763.61	91160.09	106880.9
b-alanine	3354392	2171773	2900068	2062373	2904945	3163339
betaine	3676734	2416428	5523448	2972951	3326575	4443042
Capryloyl glycine	100108.4	125431.2	72445.84	23445.25	54568.92	61635.31
Carbamoyl phosphate	122623.6	80428.16	82089.24	94954.9	87755.16	103381.5
carnosine	172105.9	139154	80631.48	60578.09	146220.9	138956.3
cellobiose	28897.19	32065.76	83235.99	30866.32	44527.46	40991.66
Cholic acid	1058606	41240.72	375613.8	81654.41	513096.6	179026.3
Citramalic acid	116628	106739.2	150447.4	100737.2	128395.4	97057.22
citrate	155682.2	154020.9	264806.3	220028.2	223131.2	286108.4
citrulline	558053.1	486823.1	770852.2	446969.7	730762	681176.6
creatine	1143357	726252	817618.2	712379.7	915787.5	796696.8
Creatinine	377510.6	288084.1	391072	259763.7	435763.3	394494.7
Cyclic-ADP-ribose	62828.61	57818.75	41316.39	50363.54	67288.44	38343.54
cyclic-IMP	636209.2	515357.2	454167.3	1238844	906956	729482.8
Cysteine-glutathione disulphide	35146.43	22834.81	68788.95	23978.34	36295.27	234913.2
Cystine	2251.828	764.0213	6090.682	3345.094	893.0056	23208.73
cytidine	59156.91	56958.46	69637.2	89657.26	62724.45	61468.54
D-Arabitol	15258.62	14074.81	21860.8	15580.86	17861.51	29033.67
D-Fructose	1.28E+07	1.38E+07	1.58E+07	1.65E+07	2.10E+07	1.77E+07
dihydroorotate	3218.25	3598.449	3191.199	3971.444	1999.354	5877.501
dimethylglycine	15521.34	12943.37	15642.12	10694.3	22999.26	25867.58
D-mannose 6-phosphate	47780.52	29190.32	14097.05	24057.18	25585.45	58392.25
fructose-6-phosphate	47780.52	29190.32	14097.05	24057.18	25585.45	58392.25
fumarate	178548.8	90315.16	357723.9	205192.3	293803.7	190620.9
Galactose	1.28E+07	1.38E+07	1.58E+07	1.65E+07	2.10E+07	1.77E+07
Galacturonic acid	120042.9	74571.16	88331.66	67599.84	90389.3	124335.5
glucose-1-phosphate	47780.52	29190.32	14097.05	24057.18	25585.45	58392.25

glucose-6-phosphate	47780.52	29190.32	14097.05	24057.18	25585.45	58392.25
Glutaconic acid	241157.2	209838.7	311575.7	312100.2	328898.5	459660.2
glutamate	763452.9	609382.4	619263.4	761769.4	854587.2	1035786
glutamine	4302504	4511728	6445120	6195112	6070974	6394166
Glutaric acid	1223946	1288767	1707114	1489803	1941283	1594866
glutathione disulfide	61910.41	58479.09	41089.88	25741.73	29926.63	78679.75
glycerate	30327.88	22457.51	28223.92	23734.2	43025.66	40162.71
glycine	644935.8	468714.1	611378.8	514490.2	634776.2	636699.4
glycolate	725673.5	704429.4	854514	889047.8	1056901	816525.3
glyoxylate	67637.71	68003.75	77202.62	71538.03	99611.87	78768.6
histidine	160885.8	125268.1	138447	141827.2	200889.9	171293.3
Homocarnosine	126141.5	94684.29	98899.78	62323.64	91124.35	117331.9
homocysteic acid	459256	450774	491144	585091.5	495967	437980.9
homoserine	607141.8	346572.2	760359.4	376843.4	653301.3	660594.4
hydroxyphenylpyruvate	1592594	1284612	2920757	1546420	1604649	1834456
hydroxyproline	34139.29	24047.79	29226.17	24282.24	64939.5	59450.86
hypoxanthine	3015.211	1740.968	3636.945	2381.318	2291.523	1452.702
Imidazoleacetic acid	297251.4	234215.8	245365.7	366021.7	679500.3	362240
Indole-2-carboxylic acid	62876.28	72232.9	102557.9	119129.9	99544.59	58551.03
Indole-3-acetaldehyde	3149708	3655958	5013342	4150223	3836762	3499797
Indole-3-lactic acid	240218.7	271731.6	447125.9	304689.5	261239.7	290656.5
Indole-3-pyruvic acid	687350.8	604967.4	895564.2	676476.7	723202.6	546788.3
inosine	6763.847	8017.469	9990.821	9568.648	8199.763	7958.994
isoleucine	1895128	1375871	3300269	1760673	2033293	2562532
ketoleucine	1.15E+07	8597229	1.22E+07	1.44E+07	1.42E+07	9783399
lactate	8.73E+07	8.43E+07	1.21E+08	9.34E+07	8.99E+07	1.04E+08
Lactose	28897.19	32065.76	83235.99	30866.32	44527.46	40991.66
leucine	2677588	2104073	4699762	2887558	3458847	4329508
L-Fucose	70677.09	102983.7	110429.6	136224.1	94925.96	131156.9
L-Hydroxyproline	34955.62	28898.19	36207.46	23782.08	41305.98	59933.06
Linoleic acid	1.11E+09	7.90E+08	8.24E+08	1.06E+09	9.14E+08	4.11E+08
Lipoic acid	6928.445	2785.259	3485.311	2915.743	2847.731	8284.042
Lithocholic acid	47060	16811.37	40025.55	19157.31	11370.18	3609.414
L-norvaline	3676734	2416428	5523448	2972951	3326575	4443042
L-Rhamnose	70677.09	102983.7	110429.6	136224.1	94925.96	131156.9
L-Threonic acid	69500.9	62176.51	80031.07	53769.88	68527.75	82250.68
lysine	423094.5	286355.5	393740.5	375532.1	561387.8	536224.7
malate	642473.1	436463.9	1285597	830301.6	1299809	878397.8
Malonic acid	227891.8	160115	305549.2	337200.7	332827.1	354766.3
Mannose	1.28E+07	1.38E+07	1.58E+07	1.65E+07	2.10E+07	1.77E+07
methionine	546635.6	358280.4	563383.4	395523.9	530356	598107.4
Methionine sulfoxide	10150.57	6186.503	12664.1	12792.81	17216.38	27422.09
Methylmalonic acid	3223741	2388007	2777331	2343722	2456674	1680375
myo-inositol	152254	114281	139901.8	99804.91	119878.1	196122
Myristic acid	1.35E+07	1.25E+07	7594014	8121280	3802840	2644438
N2-methylguanosine	36387.71	17641.52	40332.22	39748.42	33569.61	38736.39
N-Acetylaspartic acid	93498.79	64103.43	66669.19	50285.48	83251.96	96427.56
N-acetyl-glutamate	14654.83	9995.177	28553.97	17767.41	18150.74	37865.2
N-acetyl-glutamine	32270	22122.13	34971.73	23871.87	22966.9	40802.57
N-Acetylglycine	197037.3	165413.8	234026.9	229283.9	128934.1	151669.4
N-Acetyl-L-alanine	34955.62	28898.19	36207.46	23782.08	41305.98	59933.06
N-Acetyl-L-asparagine	44492.51	24984.3	44860.88	25784.49	18096.2	32674.77
N-Acetyl-L-isoleucine	110052.5	81085.41	329929	122542	127945.9	193549.3
N-Acetyl-L-methionine	28168.06	22451.88	37404.66	12193.18	20253.66	22849.03
N-acetyl-L-ornithine	38107.9	25151.19	55320.25	34517.2	39387.42	57092.1
N-acetyl-L-phenylalanine	97983.41	162364.8	468633.5	137951.4	73098.02	217849.7
N-Acetyl-L-serine	12823.72	8657.042	10612.32	10727.04	14225.66	13397.87
N-Acetylneuraminic acid	10571.15	6834.819	8846.109	5236.097	14947.83	12549.61
NADPH	10606.8	10440.47	9102.065	9703.253	8113.622	10539.98
N-Butyrylglycine	102859.4	86242.71	154234.6	61881.41	35750.63	52220.72
N-Iso valerylglycine	169841.5	90058.99	225676.2	76814.47	75693.6	90479.98
N-Methyl-D-aspartic acid	763452.9	609382.4	619263.4	761769.4	854587.2	1035786
N-Tiglylglycine	15640.99	9968.501	26365.1	12707.29	8445.088	12402.23
O-acetyl-L-serine	12823.72	8657.042	10612.32	10727.04	14225.66	13397.87
O-Phosphorylethanolamine	11457.47	8165.797	9157.796	5194.4	7146.838	17681.48

ornithine	72862.59	71769.62	105261.1	55763.79	83280.27	105696
orotate	107522.8	61792.32	102784	72842.48	126426.7	111535.1
pantothenate	80459.97	58800.49	201123	218525.7	66342.7	54155.23
p-Cresol	22650.17	7605.48	32602.5	18400.36	15815.87	13130
phenylacetyl glutamine	791.0923	540.5267	532.1081	0	662.8441	0
phenylalanine	1242482	939667.8	1489166	1175794	1268886	1666322
Phenyllactic acid	156689.1	145395.3	206771.8	111382.5	131661.2	293492.2
Pipecolic acid	41350.54	32372.82	32645.4	26673.07	39393.29	44787.89
proline	906834.1	692225.7	1212371	791894.6	1538514	1582690
pseudouridine	61731.59	84057.63	506305.2	613920.7	188160	108273.8
Pyroglutamic acid	981689.8	740929.1	597636.6	827441.8	1302559	884066.4
pyruvate	4.99E+07	4.57E+07	3.14E+07	3.53E+07	6.23E+07	5.38E+07
Quinic acid	2995.973	1995.697	3323.466	0	2829.943	1966.279
Ribose	546696.7	585514.3	851807.8	709001.8	935056.7	715650.6
ribose-5-phosphate	2042.873	972.1364	579.27	2786.239	0	10402
Ribothymidine	4630.667	5713.986	7068.021	3276.3	5670.715	2458.604
sarcosine	3354392	2171773	2900068	2062373	2904945	3163339
Sebacic acid	123651.1	80504.95	175959.4	59943.48	208926.9	50663.89
serine	468714.3	388696.2	435236.4	229648.9	490935.8	483021.2
sn-glycerol-3-phosphate	219342.6	251924.6	118009.5	105381.1	120003.1	61341.62
sorbitol	11345.06	7481.069	11703.25	6053.095	10355.24	10008.81
Stearic acid	4.19E+08	3.89E+08	3.92E+08	3.55E+08	4.07E+08	2.58E+08
succinate	3223741	2388007	2777331	2343722	2456674	1680375
sucrose	29367.98	55583.71	30935.36	44380.89	65848.79	72571.87
taurine	1.43E+07	1.17E+07	1.33E+07	1.08E+07	1.07E+07	9870473
Taurodeoxycholic acid	1892188	936608.4	1194691	1348344	714697.9	861721.1
threonine	607141.8	346572.2	760359.4	376843.4	653301.3	660594.4
thymine	297251.4	234215.8	245365.7	366021.7	679500.3	362240
trans-urocanic acid	32631.67	17957.27	11396.29	11413.67	103984.4	18729.12
Tricarballic acid	65126.97	10692.4	39939.6	20822.16	39444.56	80299.03
tropic acid	26778.16	1236.037	6306.475	3118.075	6190.34	3731.208
tryptophan	541295.1	651770.6	1119822	847849	889318.3	628852.6
tyrosine	123763.9	84266	168439.8	132343.5	137462.3	144076.5
Undecanoic acid	28156.72	19991.43	39360.51	29203.66	37948.95	24241.17
uridine	61731.59	84057.63	506305.2	613920.7	188160	108273.8
valine	3676734	2416428	5523448	2972951	3326575	4443042

Sirt3 WT, KO mice_Plasma

A student's t test (unpaired) was used for statistical analysis.

Metabolites	p-value	mean_plasma_KO	mean_plasma_WT	Fold change
(R)-(+)-2-Pyrrolidone-5-carboxylic acid	0.284040036	1004689.067	773418.5	1.299023836
2-aminobutyrate	0.448742886	18608.96667	15145.57367	1.22867361
2-Aminooctanoic acid	0.092420461	7270.583	11864.673	0.612792531
2-Deoxy-D-ribose	0.761695497	3870.358667	3558.313333	1.087694732
2-hydroxyglutarate	0.328340478	46064.37667	34178.2	1.347770704
2-Hydroxyoctanoic acid	0.196729544	131407.7467	232594.8	0.56496425
2-Hydroxyvaleric acid	0.119765941	8983917.333	6232662	1.441425403
2-Ketobutyric acid	0.232662686	724089.8667	606083.2	1.194703741
2-Methylglutaric acid	0.422407261	28487.31667	24125.34667	1.180804449
2-Oxoisopentanoic acid	0.456569101	15000000	17233333.33	0.87040619
2-Phenylbutyric acid	0.172165457	3051.706667	4594.641333	0.664188224
2-Phenylpropionic acid	0.870914256	1270894.967	1450137.333	0.876396282
3-hydroxybutyrate	0.525343889	3222256	4778146	0.674373701
3-Hydroxypropionic Acid	0.894485314	95766666.67	97533333.33	0.981886535
3-Indolepropionic acid	0.643308681	236665.1	187709.6	1.260804455
3-Methylglutaconic Acid	0.271041273	4293758.333	3612735	1.188506307
3-Methylglutaric acid	0.422407261	28487.31667	24125.34667	1.180804449
3-ureidopropionate	0.626938995	72520.47667	52517.66667	1.380877736
4-aminobutyrate	0.337912474	19853.71333	14702.27667	1.350383603
4-Methylvaleric acid	0.059769456	258445.8	341889.9333	0.755932757
5-aminovaleric acid	0.786327141	3580856	3872203.333	0.924759289
5-Keto-D-gluconic acid	0.281582315	50578.47	37961.25667	1.332370802
acetoacetate	0.867789228	449118.4	461156.7667	0.973895283
aconitate	0.12264568	1071505.833	800186.2	1.339070623
adenine	0.536573308	4157.188667	5673.428333	0.73274719
Adipic acid	0.422407261	28487.31667	24125.34667	1.180804449
Adonitol	0.478082002	20825.34667	17064.74333	1.220372687
a-ketoglutarate	0.621795785	376893.3667	422563.6333	0.891920972
alanine	0.846973694	2710219	2808744.333	0.964921929
allantoin	0.783466441	2631713	2831956.667	0.929291409
Amino adipic acid	0.251519321	37567.99	26462.73	1.419656627
Aminolevulinic acid	0.193119566	49557.53333	29137.75	1.700801652
anserine	0.432101091	90259.96333	106575.19	0.846913464
arginine	0.019720007	406683.3667	168625.4333	2.411755799
asparagine	0.610757034	359810.3	307988.3667	1.168259386
aspartate	0.100455091	86601.53333	52362.56667	1.653882513
b-alanine	0.846973694	2710219	2808744.333	0.964921929
betaine	0.786327141	3580856	3872203.333	0.924759289
Capryloyl glycine	0.05204108	46549.82667	99328.48	0.468645314
Carbamoyl phosphate	0.983631626	95363.85333	95047	1.003333649
carnosine	0.708580751	115251.7633	130630.46	0.882273272
cellobiose	0.635087856	38795.14667	48066.31333	0.807117167
Cholic acid	0.513538784	257925.77	491820.1733	0.52443105
Citramalic acid	0.391001162	108729.94	124604.8667	0.87259786
citrate	0.291682389	243089.2667	191503.1333	1.269374879
citrulline	0.911930181	619636.1	605242.8	1.023781035
creatine	0.565150658	808288	895742.4	0.902366573
Creatinine	0.866802423	363340.5667	352222.2333	1.031566245
Cyclic-ADP-ribose	0.860482817	51998.50667	53987.91667	0.963150829
cyclic-IMP	0.055876125	958427.6	535244.5667	1.790634898
Cysteine-glutathione disulphide	0.465824693	98395.60333	42256.73	2.32851911
Cystine	0.446074792	9148.9432	3035.510433	3.013971917
cytidine	0.40163513	71283.41667	61917.52333	1.151264018
D-Arabitol	0.478082002	20825.34667	17064.74333	1.220372687

D-Fructose	0.056844197	18400000	14133333.33	1.301886792
dihydroorotate	0.615215375	3949.433	3335.966	1.18389486
dimethylglycine	0.337912474	19853.71333	14702.27667	1.350383603
D-mannose 6-phosphate	0.722546968	36011.62667	30355.96333	1.186311443
fructose-6-phosphate	0.722546968	36011.62667	30355.96333	1.186311443
fumarate	0.816982071	229872.3	208862.62	1.100590905
Galactose	0.056844197	18400000	14133333.33	1.301886792
Galacturonic acid	0.992704597	94108.21333	94315.24	0.99780495
glucose-1-phosphate	0.722546968	36011.62667	30355.96333	1.186311443
glucose-6-phosphate	0.722546968	36011.62667	30355.96333	1.186311443
Glutaconic acid	0.112142609	366886.3	254190.5333	1.443351549
glutamate	0.080675362	884047.5333	664032.9	1.331330923
glutamine	0.174990657	6220084	5086450.667	1.22287316
Glutaric acid	0.257745591	1675317.333	1406609	1.191032713
glutathione disulfide	0.644842202	44782.70333	53826.46	0.831983068
glycerate	0.251816557	35640.85667	27003.10333	1.319880024
glycine	0.778372836	595321.9333	575009.5667	1.035325267
glycolate	0.13504465	920824.7	761538.9667	1.209162945
glyoxylate	0.240727381	83306.16667	70948.02667	1.174185817
histidine	0.209877072	171336.8	141533.6333	1.210573035
Homocarnosine	0.432101091	90259.96333	106575.19	0.846913464
homocysteic acid	0.427290301	506346.4667	467058	1.084119032
homoserine	0.961812223	563579.7	571357.8	0.986386639
hydroxyphenylpyruvate	0.623286829	1661841.667	1932654.333	0.85987527
hydroxyproline	0.193119566	49557.53333	29137.75	1.700801652
hypoxanthine	0.297442374	2041.847667	2797.708	0.729828726
Imidazoleacetic acid	0.120554844	469254	258944.3	1.81218123
Indole-2-carboxylic acid	0.572723537	92408.50667	79222.36	1.16644476
Indole-3-acetaldehyde	0.85959675	3828927.333	3939669.333	0.971890534
Indole-3-lactic acid	0.630136872	285528.5667	319692.0667	0.893136228
Indole-3-pyruvic acid	0.471438278	648822.5333	729294.1333	0.889658238
inosine	0.779765364	8575.801667	8257.379	1.038562196
isoleucine	0.913797036	2118832.667	2190422.667	0.96731681
ketoleucine	0.338346689	12794466.33	10765743	1.188442482
lactate	0.894485314	95766666.67	97533333.33	0.981886535
Lactose	0.635087856	38795.14667	48066.31333	0.807117167
leucine	0.678401101	3558637.667	3160474.333	1.125982144
L-Fucose	0.217517674	120768.9867	94696.79667	1.275322829
L-Hydroxyproline	0.479432818	41673.70667	33353.75667	1.249445665
Linoleic acid	0.636386847	795000000	908000000	0.875550661
Lipoic acid	0.904327882	4682.505333	4399.671667	1.064285176
Lithocholic acid	0.084426377	11378.968	34632.30667	0.32856512
L-norvaline	0.786327141	3580856	3872203.333	0.924759289
L-Rhamnose	0.217517674	120768.9867	94696.79667	1.275322829
L-Threonic acid	0.818115179	68182.77	70569.49333	0.966179106
lysine	0.159783092	491048.2	367730.1667	1.335349244
malate	0.50852492	1002836.133	788178	1.272347279
Malonic acid	0.060360305	341598.0333	231185.3333	1.477593879
Mannose	0.056844197	18400000	14133333.33	1.301886792
methionine	0.844469233	507995.7667	489433.1333	1.037926802
Methionine sulfoxide	0.11532719	19143.76	9667.057667	1.980308865
Methylmalonic acid	0.136365337	2160257	2796359.667	0.772524731
myo-inositol	0.925558775	138601.67	135478.9333	1.023049611
Myristic acid	0.062232408	4856186	11198004.67	0.433665295
N2-methylguanosine	0.461952546	37351.47333	31453.81667	1.1875021
N-Acetylaspartic acid	0.914655923	76655	74757.13667	1.025387052
N-acetyl-glutamate	0.472943019	24594.45	17734.659	1.386801404

N-acetyl-glutamine	0.938531688	29213.78	29787.95333	0.980724646
N-Acetyl glycine	0.47077446	169962.4667	198826	0.854830187
N-Acetyl-L-alanine	0.479432818	41673.70667	33353.75667	1.249445665
N-Acetyl-L-asparagine	0.181658876	25518.48667	38112.56333	0.669555769
N-Acetyl-L-isoleucine	0.769327195	148012.4	173688.97	0.852169254
N-Acetyl-L-methionine	0.113944766	18431.95667	29341.53333	0.628186552
N-acetyl-L-ornithine	0.728338718	43665.57333	39526.44667	1.104717904
N-acetyl-L-phenylalanine	0.457505228	142966.3733	242993.9033	0.588353746
N-Acetyl-L-serine	0.262555916	12783.52333	10697.694	1.194979342
N-Acetylneuraminic acid	0.525984098	10911.179	8750.692667	1.246893179
NADPH	0.523743589	9452.285	10049.77833	0.940546616
N-Butyrylglycine	0.041842886	49950.92	114445.57	0.436460057
N-Iso valerylglycine	0.110940888	80996.01667	161858.8967	0.500411274
N-Methyl-D-aspartic acid	0.080675362	884047.5333	664032.9	1.331330923
N-Tiglylglycine	0.286742539	11184.86933	17324.86367	0.645596384
O-acetyl-L-serine	0.262555916	12783.52333	10697.694	1.194979342
O-Phosphorylethanolamine	0.922545811	10007.57267	9593.687667	1.043141388
ornithine	0.929125606	81580.02	83297.77	0.979378199
orotate	0.582174709	103601.4267	90699.70667	1.142246546
pantothenate	0.9950706	113007.8767	113461.1533	0.996005006
p-Cresol	0.524448704	15782.07667	20952.71667	0.753223409
phenylacetyl glutamine	0.166096859	220.9480333	621.2423667	0.355655128
phenylalanine	0.539643573	1370334	1223771.933	1.119762566
Phenyllactic acid	0.886413135	178845.3	169618.7333	1.054395918
Pipecolic acid	0.819185921	36951.41667	35456.25333	1.042169242
proline	0.28483519	1304366.2	937143.6	1.391853074
pseudouridine	0.707293376	303451.5	217364.8067	1.396047063
Pyroglutamic acid	0.284040036	1004689.067	773418.5	1.299023836
pyruvate	0.450697671	50466666.67	42333333.33	1.192125984
Quinic acid	0.274749356	1598.740667	2771.712	0.5768062
Ribose	0.360174307	786569.7	661339.6	1.189358236
ribose-5-phosphate	0.365966648	4396.079667	1198.093133	3.669230333
Ribothymidine	0.168883131	3801.873	5804.224667	0.655018236
sarcosine	0.846973694	2710219	2808744.333	0.964921929
Sebacic acid	0.746233844	106511.4233	126705.15	0.840624263
serine	0.755222403	401201.9667	430882.3	0.931117307
sn-glycerol-3-phosphate	0.083697108	95575.27333	196425.5667	0.486572471
sorbitol	0.517110138	8805.715	10176.45967	0.865302403
Stearic acid	0.250550268	34000000	40000000	0.85
succinate	0.136365337	2160257	2796359.667	0.772524731
sucrose	0.13694396	60933.85	38629.01667	1.577411367
taurine	0.031280058	10456824.33	1310000	0.798230865
Taurodeoxycholic acid	0.346641602	974921	1341162.467	0.726922371
threonine	0.961812223	563579.7	571357.8	0.986386639
thymine	0.120554844	469254	258944.3	1.81218123
trans-urocanic acid	0.47276197	44709.06333	20661.74333	2.163857261
Tricarballic acid	0.743496677	46855.25	38586.32333	1.214296827
tropic acid	0.418019307	4346.541	11440.224	0.379934956
tryptophan	0.931951122	788673.3	770962.5667	1.022972235
tyrosine	0.638203135	137960.7667	125489.9	1.099377453
Undecanoic acid	0.860209154	30464.59333	29169.55333	1.044396977
uridine	0.707293376	303451.5	217364.8067	1.396047063
valine	0.786327141	3580856	3872203.333	0.924759289

Sirt3 WT, KO mice_brain-NTS**metabolites**

	NTS_WT 1	NTS_WT 2	NTS_WT 3	NTS_KO 1	NTS_KO 2	NTS_KO 3
(R)-(+)-2-Pyrrolidone-5-carboxylic acid	5192025	4651381	4492710	1460533	3637428	1657892
2-Deoxy-D-ribose	6951.756	3084.213	2471.728	3002.076	3658.184	2679.178
2-hydroxybutyrate	560596.2	494897.9	275179.5	167963.1	397638.1	184134.3
2-Hydroxycaproic acid	426267	80458.31	22648.18	107756.2	95273.31	176290.7
2-hydroxyglutarate	863284.8	976209.8	1062171	254010.6	542945.2	370917.5
2-Hydroxyhexanedioic Acid	96648.38	75744.9	120508	38678.53	44176.77	280014.4
2-Hydroxyoctanoic acid	26583.51	27554.15	36486.93	33875.72	65328.68	74417.96
2-Hydroxyvaleric acid	66056.1	56700.33	60261.97	24557.44	29841.91	59561.14
2-Isopropylmalic acid	7085.301	5959.541	4071.635	5336.272	3083.374	2567.409
2-Ketobutyric acid	65530.67	31388.38	40844.3	66837.7	28537.17	73324.85
2-Methylglutaric acid	94385.63	54509.46	17343.07	56330.06	51529.59	30657.4
2-Methylsuccinic acid	107216.3	72247.79	18588.1	73630.4	83848.71	45463
2-Oxo-3-phenylpropanoic acid	2037297	196489	793355.8	1311428	1222348	1280240
2-Oxoadipic acid	7090.926	7725.24	12986.88	7209.176	5654.283	8791.937
2-Phenylbutyric acid	6564.322	4374.373	9569.006	20554.29	10223.02	8417.048
2-Phenylpropionic acid	39417.4	33820.21	27458.93	36261.4	43877.06	15476.34
3-4-Dihydroxyhydrocinnamic acid	41297.71	52418.89	96757.25	22848.49	80908.48	22128
3-5-Dihydroxybenzoic acid	14610.45	17722.41	5610.25	11771.86	17080.13	5200
3-Cresotinic acid	27559.64	20429.61	20660.87	22089.05	26531.35	56659.5
3-hydroxybutyrate	166487.5	151113	152851.8	49598.96	210551.2	61161.31
3-Hydroxycinnamic acid	2037297	196489	793355.8	1311428	1222348	1280240
3-Hydroxyisovaleric acid	453508.4	370160.8	52544.97	139639.6	299568	74365.45
3-Hydroxypropionic Acid	5.80E+07	6.05E+07	6.90E+07	2.87E+07	5.42E+07	3.42E+07
3-Methyladipic acid	55974.46	34720.64	11042.83	36263.48	37275.71	17847.29
3-Methylglutaric acid	94385.63	54509.46	17343.07	56330.06	51529.59	30657.4
3-phosphoglycerate	113377.7	0	137751.4	10362.88	43848.27	26299.54
4-hydroxy-3-methylbenzoic acid	27559.64	16129.65	20660.87	22089.05	26531.35	56659.5
4-Methylvaleric acid	989543.7	351595	280396.6	582585.9	474867	661340.2
5'-Methylthioadenosine	47896.73	53665.18	78643.84	15764.78	35176.14	51183.56
5-Phenylvaleric acid	66005.84	37354.71	13693.8	49253.19	58811.52	20365.61
6-Dimethylaminopurine	106545.4	153821.5	142196.8	146272.5	229655.1	208110.5
6-phospho-D-gluconate	16320.81	13193.78	24810.11	1403.307	9467.985	6916.285
acetoacetate	529643.8	611484	727535.2	366209.9	594515.3	443149.5
acetyl-CoA	5060.389	1158.286	0	0	0	0
acetylphosphate	30256.99	26111.74	39829.15	12883.17	34118.59	21143.36
aconitate	236385.2	176843.9	512441.5	167547.7	218977.1	67603.45
adenine	265677.1	143519.6	381219.5	246423.7	145588.2	157106.6
adenosine	509554.1	305767.3	864745.1	598030	293587.4	376942.3
Adipic acid	94385.63	54509.46	17343.07	56330.06	51529.59	30657.4
Adonitol	17830.02	19159.93	17458.45	6028.35	9222.37	6818.117
ADP	117022.6	116664.5	136093	39830.9	112995.3	49494.37
ADP-D-glucose	63475.01	56210.2	129890.8	34404.3	73040.05	35544.54
a-ketoglutarate	219858.7	263062.5	346318.1	111328	260188.1	162795.3
Ala-Ala	5157.047	7311.552	4953.214	3218.639	5033.119	3409.346
alanine	1.45E+07	1.30E+07	1.54E+07	5564356	9000982	6975698
allantoin	24950.94	26686.83	30245.06	59685.44	17431.18	9333.738
Aminoadipic acid	28220.97	15131.66	25178.15	6812.752	18295.55	15997.67
Aminolevulinic acid	733188.9	871587.2	1188072	337804.9	774907.2	401018.9
Aminomalonic acid	4169.417	1118.131	4845.979	495.5428	631.4963	698.1761
AMP	869597.7	536676.7	520640.7	339500.4	1545602	486911
anserine	232723.8	0	133479.3	0	0	0
Arachidic acid	5344788	4083343	889500.4	1177716	1001238	2007540
arginine	816144.8	698592.7	602158.8	145697.6	382880.1	256478.7

asparagine	257593.2	206616.2	265318.4	53806.08	158588.8	64271.57
aspartate	1.47E+07	1.54E+07	1.88E+07	4187123	7173958	8262646
Aspartyl-L-phenylalanine	12654.94	7509.758	6868.745	3396.583	4755.295	3282.108
ATP	22525.65	21294.34	36398.75	13213.29	14465.51	15333.88
b-alanine	1.45E+07	1.30E+07	1.54E+07	5564356	9000982	6975698
betaine	843323.4	722865.2	648339.2	331534.9	509068.6	309444
biotin	981.8032	839.6287	835.2602	0	0	0
carnosine	1.06E+07	8562884	5327568	1953043	3202388	1994596
CDP	1926.537	0	3209.342	682.4227	976.5436	901.0068
cellobiose	416806.8	259922	185735.6	514704.5	232041.4	470374
cis-uropic acid	69761.95	73583.61	10432.69	110679.8	55788.02	19973.26
Citramalic acid	863284.8	976209.8	1062171	254010.6	542945.2	370917.5
citrate	892959.8	736989.7	2872572	238578.5	526008.8	184054.2
citrulline	20531.95	21161.19	10271.79	13288.12	13896.64	8409.188
CMP	104138.3	81288.74	104383.6	28750.66	73054.63	37722.64
coenzyme A	1921.529	4470.116	4393.892	0	7684.283	3415.918
creatine	7819346	7225918	8695871	3325781	5187394	4038711
Creatinine	101699.6	112410.1	149561.2	48163.84	71585.02	48579.68
Cyclic-ADP-ribose	14657.22	9993.126	13853.2	1249.328	5297.634	4502.507
cyclic-AMP	13351.73	13052.19	10903.12	6559.215	6036.305	3445.681
cystathionine	105372.2	77619.03	94356.99	6642.335	65329.19	15078.18
Cysteine-glutathione disulphide	913389.3	966557.5	1978411	186552.9	582225.2	266158.8
Cystine	198662.3	212824.6	316782	32458.33	108118.5	56104.33
cytidine	16367.11	14423.24	14760	10258.78	12160.05	9820.618
D-Arabitol	17830.02	19159.93	17458.45	6028.35	9222.37	6818.117
dCMP	8041.891	4988.074	4923.339	1227.745	0	0
Dehydroascorbic acid	31825.08	21607.67	38126.98	10131.31	13869.8	10494.44
deoxyinosine	7133.715	9812.35	8303.46	3092.333	4090.436	3301.439
deoxyuridine	18324.31	10018.49	13912.59	16055.27	7546.701	26881.78
dephospho-CoA	84919.94	73183.12	88224.16	9941.071	30898.26	14608.91
D-erythrose-4-phosphate	4142.453	3148.325	4649.168	2171.437	7208.769	1074.498
D-Fructose	9560.477	5511.554	4834.131	5547.563	5211.443	2864.485
dGDP	117022.6	116664.5	136093	39830.9	112995.3	49494.37
D-glucono-delta-lactone-6-phosphate	23029.11	20005.54	22225.31	8462.398	16099.64	19431.66
D-glucosamine-6-phosphate	30120.35	31093.48	29849.81	16915.84	23337.91	20591.62
D-glyceraldehyde-3-phosphate	291277.3	249640.6	267037.7	41908.62	125355.3	54500.7
dGMP	869597.7	536676.7	520640.7	339500.4	1545602	486911
dihydroxy-acetone-phosphate	291277.3	249640.6	267037.7	41908.62	125355.3	54500.7
DL-Arabinose	18430.34	3843.681	2304.96	4664.085	4423.398	2065.605
D-mannose 6-phosphate	1.02E+07	9124712	7093886	2585741	6308642	3891625
D-sedoheptulose-7/1-phosphate	798549.5	602614.9	904197.6	130080.2	433545.2	201733.9
dTDP	43137.6	57396.25	65237.04	0	23148.9	4790.417
dUMP	10211.25	17340.65	20117.97	13030.67	18272.67	15069.56
D-Xylose	49734.75	7613.418	1673.02	11612.66	7571.744	4957.343
elcosapentaenoic acid	4671028	5477654	3076870	2277733	1394650	1215964
FAD	252958.2	178037.8	162818	60433.5	105207.1	67040.05
FMN	17066.09	11667.65	9515.597	3317.094	5812.265	965.8057
fructose-1-6-bisphosphate	241691.4	277939.9	364863.6	17265.55	95192.16	52495.08
fructose-6-phosphate	1.02E+07	9124712	7093886	2585741	6308642	3891625
fumarate	1470732	1681434	2139951	629452.6	1297203	997056.5
Galacturonic acid	9246.528	7142.484	9003.136	3399.01	4117.186	6302.782
GDP	54318.11	46912.44	73802.74	16721.36	29421.29	21121.32
glucose-1-phosphate	1.02E+07	9124712	7093886	2585741	6308642	3891625
glucose-6-phosphate	1.02E+07	9124712	7093886	2585741	6308642	3891625
Glutaconic acid	77452.19	87591.69	243590.5	74017.88	62297.42	80855.35

glutamate	2.08E+07	2.12E+07	2.50E+07	7695864	1.56E+07	9861363
glutamine	1.15E+07	1.10E+07	1.31E+07	3826408	1.90E+07	5196328
Glutaric acid	107216.3	72247.79	18588.1	73630.4	83848.71	45463
glutathione	169584.9	97778.57	137612	22171.14	45067.44	40279.54
glutathione disulfide	561672.1	440231.8	946110.7	259275.6	534584.4	266755.9
glycerate	63241.41	33755.34	32438.36	11484.38	18798.82	9660.413
Glycerophosphocholine	73050.16	51558.58	129527.9	89421.5	49325.42	74298.18
glycine	2674488	2397150	1808368	571423.6	1469984	758643.1
glycolate	586335.2	409545.4	253682.9	298294.4	360596	274710
Glycyl-L-leucine	6291.868	5511.262	4817.544	1652.791	3968.78	1906.864
Glycyl-L-tyrosine	48520.04	43828.64	31191.61	10151.95	20576.77	13065.72
glyoxylate	124120.5	105947.6	110510	55755.23	84358.32	67886.91
GMP	1390803	1115681	1499839	522433.4	1158897	560670.4
GTP	781.1929	1400.672	2061.514	0	1050.75	838.6186
Guaiacol	20871.44	18330.04	3178.78	8247.099	10223.09	6531.907
Guanidoacetic acid	6531.174	5774.553	3210.872	2249.753	4768.223	2547.975
guanosine	2700798	2922465	4025221	1080145	1788210	1363354
Homocarnosine	2.06E+07	1.84E+07	1.27E+07	3738113	5165538	4470774
homoserine	304782.8	211151.1	217223.5	48599.54	57585.08	54430.97
Hydroxyindoleacetic acid	5081.931	5279.891	12001.62	4455.296	1392.916	2374.664
hydroxyproline	733188.9	871587.2	1188072	337804.9	774907.2	401018.9
Hypotaaurine	0	0	927.4522	0	0	0
hypoxanthine	9410096	1.02E+07	9994173	3267022	6543024	4779542
IDP	27468.71	22089.99	17696.26	3735.023	12847.25	9941.536
Imidazoleacetic acid	16283.36	9958.774	18781.06	5379.99	16320.62	13339.56
IMP	206920.2	85673.9	100884.5	83821.56	187882.7	84633.91
Indole-2-carboxylic acid	2292.707	8675.776	8390.458	4916.584	1220.269	817.4373
Indole-3-acetaldehyde	58710.04	23867.5	43266.45	77340.95	41768.25	62508.06
Indole-3-lactic acid	6911.647	0	0	7696.016	0	0
inosine	5.37E+07	6.49E+07	7.26E+07	1.89E+07	3.48E+07	2.57E+07
isoleucine	648868.1	653585.8	513348.3	235811.9	380943.9	256615.2
ketoleucine	150700.6	354320.2	213919.8	302661.1	339762.6	362341
lactate	5.80E+07	6.05E+07	6.90E+07	2.87E+07	5.42E+07	3.42E+07
Lactose	416806.8	259922	185735.6	514704.5	232041.4	470374
L-Cysteic acid	4041.406	3274.527	1061.974	2302.191	2894.268	1154.911
leucine	3086522	2882091	2203377	1001587	1553482	1174671
L-Fucose	32962.03	14273.98	8573.386	3540.993	5973.101	4662.836
L-Hydroxyproline	818869	967013.9	576610.7	115974.9	323201.4	250253.4
Linoleic acid	3.22E+07	3.17E+07	3.07E+07	1.77E+07	1.95E+07	1.48E+07
Lipoic acid	153305.5	142306.9	273912.3	6639.062	89559.88	10430.31
L-Rhamnose	17208	11870.48	3206.46	7696.268	3867.143	5454.15
L-Threonic acid	716832	600414.4	891250.5	155797.4	280283.3	186009.2
lysine	207213.8	148018.8	137298.2	30928.79	68981.4	41743.94
malate	7641588	8290738	9815885	3322594	6111720	5116242
Malonic acid	1601315	806948.4	227135.3	791078.5	735713.8	583966.8
Mandelic acid	20100.72	9054.121	9374.759	13522.45	26531.35	15813.04
mannitol 1-phosphate	11478.84	7109.611	13086.91	0	5768.422	2062.681
Mannose	44179.83	23112.99	15536.59	19408.69	24520.52	14598.89
methionine	332478.2	338374.9	275366.7	65335.65	162617.2	84608.87
Methionine sulfoxide	7584.568	6404.715	3094.221	2275.008	5372.092	3875.155
Methylmalonic acid	1824203	1736128	1715617	1270285	1852988	1042620
Mucic acid	13066.01	9479.595	11869.92	2876.885	3160.769	6106.447
Muramic acid	28059.04	21165.69	40120.41	3270.211	5218.352	6190.748
myo-inositol	6684678	5748978	8231174	2406009	2183538	2798354
Myristic acid	5.71E+07	4.00E+07	2.66E+07	3.15E+07	2.91E+07	2.57E+07

N-Acetylaspartic acid	4.42E+07	5.66E+07	7.74E+07	2.23E+07	4.26E+07	2.89E+07
N-acetylcysteine	10761.42	2242.923	9094.438	1742.101	3546.717	2518.544
N-acetyl-glutamate	232767.5	259707.9	345541.4	54308.28	138401.8	79800.85
N-acetyl-glutamine	9643.147	9590.97	7066.097	4224.237	23318.87	6455.579
N-Acetylglycine	17962.15	16355.88	14961.82	12971.12	13821.85	13375.51
N-Acetyl-L-alanine	818869	967013.9	576610.7	115974.9	323201.4	250253.4
N-Acetyl-L-arginine	4082.51	1940.466	3611.232	2558.969	3526.284	1836.416
N-Acetyl-L-asparagine	11818.49	11387.25	13556.36	7847.738	13818.92	9482.642
N-Acetyl-L-methionine	60870.41	84492.25	92537.91	25752.14	45526.97	42451
N-acetyl-L-ornithine	1756.733	3279.113	1484.723	1579.333	3691.383	0
N-Acetyl-L-proline	16905.19	11124.22	5091.355	5792.741	8669.745	7316.088
N-Acetylneuraminic acid	335957.2	333118.1	505399.8	94576.44	141300.7	108765
N-Acetyltyrosine	2359.227	742.7883	873.3111	1503.837	2099.076	1503.164
NAD+	15591.1	8334.673	9115.294	1643.165	7541.288	3396.813
NADH	0	0	0	3331.996	0	0
NADP+	3555.972	1977.729	6013.255	1063.583	3094.619	0
N-Formyl-L-methionine	10648.27	12825.69	11978.6	5160.677	8392.745	4674.651
nicotinamide	472275.7	681619.2	932890.1	304505.9	424124.9	428341.1
N-Methyl-D-aspartic acid	2.08E+07	2.12E+07	2.50E+07	7695864	1.56E+07	9861363
O-acetyl-L-serine	107580.5	68850.28	52385.98	48585.01	37398.53	28126.32
O-Phosphorylethanolamine	1676943	1330974	2495314	596393.9	969836.3	692224.8
orotate	13207.88	9305.487	9241.382	7976.994	11041.47	40496.28
pantothenate	987115.5	975064.8	1021125	408324	758701.1	466173.6
phenylalanine	861419	935582	666932.5	284016.5	700211.6	350243.9
Phenylglyoxylic acid	67854.88	28622.57	10615.04	25968.59	41470.57	45854.77
Phenyllactic acid	15550.02	14676.26	34190.93	15225.04	42115.46	25600.15
phosphocreatine	0	585.2447	0	0	0	0
phosphoenolpyruvate	0	0	45414.47	8153.787	0	0
Phosphorylcholine	6076.669	5169.834	5316.306	2707.296	4262.842	1800.911
Pimelic acid	55974.46	34720.64	11042.83	36263.48	37275.71	17847.29
Pipecolic acid	4249.747	4856.998	5326.937	2117.746	1472.04	1067.652
proline	794736.8	720575.4	547160.4	207524.2	364450.8	230228.5
pyridoxamine-5-phosphate	40844.86	35008.97	40535.52	7107.784	11964.71	7537.942
Pyroglutamic acid	5192025	4651381	4492710	1460533	3637428	1657892
pyruvate	532061.5	593835.5	947207.4	422154.5	430330.6	448061.2
Retinoic Acid	2514503	2682668	332425.5	0	182513.4	116622.7
riboflavin	21108.59	21147.24	11184.25	4429.259	6565.432	4533.23
ribose-5-phosphate	1200450	1000844	1158688	0	646700.2	384414.4
Ribothymidine	32341.32	34578.05	37936.48	18088	19117.08	18430.92
Saccharic acid	13066.01	9479.595	11869.92	2876.885	3160.769	6106.447
S-adenosyl-L-homocysteine	128386.6	149298.9	157143.4	34268.17	65984.19	33707.89
sarcosine	1.45E+07	1.30E+07	1.54E+07	5564356	9000982	6975698
Sebacic acid	43057.04	32481.53	17140.97	33232.64	35480.1	24218.35
serine	1131290	1125172	955245.2	314638.4	646951.8	432006.8
shikimate	25800.5	13695.85	3152.974	14912.98	12980.03	9140.99
sn-glycerol-3-phosphate	44950.14	32318.17	58773.86	30815.1	40147.83	22098.22
Stearic acid	2.89E+08	1.69E+08	7.88E+07	9.79E+07	7.69E+07	8.88E+07
Suberic acid	43464.07	10004.17	1506.565	31786.64	20179.32	21706.57
succinate	1824203	1736128	1715617	1270285	1852988	1042620
sucrose	416806.8	259922	185735.6	514704.5	232041.4	470374
taurine	1.47E+07	1.65E+07	1.86E+07	7644566	1.11E+07	9175684
thiamine-phosphate	1373.016	1707.417	2557.33	797.5627	881.4396	0
threonine	304782.8	211151.1	217223.5	48599.54	57585.08	54430.97
thymidine	0	7074.897	32335.38	8022.78	26943.85	8157.127
trehalose-6-Phosphate	31450.14	20492.03	58177.57	3861.048	11196.61	8093.035

Tricarballic acid	250917.8	97291.05	29422.77	67504.3	49600.52	51974.67
tryptophan	242184.7	190336.7	119713.9	27321.96	88075.8	31554.13
tyrosine	292315.3	177787.6	162752.2	28720.54	87710.77	25251.86
UDP	2194.193	1645.846	2378.248	3794.231	4551.338	3756.873
UDP-D-glucose	920789.7	746184.8	1217289	327383.1	453764.5	313010.1
UDP-D-glucuronate	26059.73	21307.25	62417.88	25206.78	42875.33	23792.18
UDP-N-acetyl-glucosamine	1608212	1289009	1855700	576885.5	1383445	627871.3
UMP	61423.48	40098.62	48357.4	21055.45	90724.34	29249.87
Undecanoic acid	630839.2	361857.1	131463.7	373876.5	338004.5	199391.9
uridine	7616568	9395499	7060650	2444507	4150512	3048118
valine	843323.4	722865.2	648339.2	331534.9	509068.6	309444
xanthine	3213161	3162150	3012952	963470.2	1533586	1136601
xanthosine	25657.09	22781.39	15018.45	7020.595	9201.666	5980.865
xanthosine-5-phosphate	3032.51	4656.449	4331.081	687.2315	3287.069	2918.284

Sirt3 WT, KO mice_brain-NTS

A student's t test (unpaired) was used for statistical analysis.

Metabolites	p-value	mean_NTS_KO	mean_NTS_WT	Fold change
(R)-(+)-2-Pyrrolidone-5-carboxylic acid	0.025409	2251951	4778705.333	0.471247094
2-Deoxy-D-ribose	0.501668	3113.146	4169.232333	0.746695255
2-hydroxybutyrate	0.16372	249911.8333	443557.8667	0.563425546
2-Hydroxycaproic acid	0.716943	126440.07	176457.83	0.716545534
2-hydroxyglutarate	0.004746	389291.1	967221.8667	0.402483767
2-Hydroxyhexanedioic Acid	0.786653	120956.5667	97633.76	1.238880554
2-Hydroxyoctanoic acid	0.094561	57874.12	30208.19667	1.915841605
2-Hydroxyvaleric acid	0.109724	37986.83	61006.13333	0.622672311
2-Isopropylmalic acid	0.170115	3662.351667	5705.492333	0.641899323
2-Ketobutyric acid	0.582957	56233.24	45921.11667	1.224561685
2-Methylglutaric acid	0.715354	46172.35	55412.72	0.833244605
2-Methylsuccinic acid	0.956701	67647.37	66017.39667	1.024690058
2-Oxo-3-phenylpropanoic acid	0.654231	1271338.667	1009047.267	1.259939657
2-Oxadipic acid	0.37959	7218.465333	9267.682	0.778885738
2-Phenylbutyric acid	0.200624	13064.786	6835.900333	1.911201943
2-Phenylpropionic acid	0.862336	31871.6	33565.51333	0.949534115
3-4-Dihydroxyhydrocinnamic acid	0.45113	41961.65667	63491.28333	0.660904213
3-5-Dihydroxybenzoic acid	0.808103	11350.66333	12647.70333	0.897448575
3-Cresotinic acid	0.333399	35093.3	22883.37333	1.533571973
3-hydroxybutyrate	0.393679	107103.8233	156817.4333	0.682984162
3-hydroxybutyrate	0.393679	107103.8233	156817.4333	0.682984162
3-Hydroxycinnamic acid	0.654231	1271338.667	1009047.267	1.259939657
3-Hydroxyisovaleric acid	0.434402	171191.0167	292071.39	0.586127305
3-Hydroxypropionic Acid	0.049508	39021036.67	62486486.67	0.624471606
3-Methyladipic acid	0.822784	30462.16	33912.64333	0.898253778
3-Methylglutaric acid	0.715354	46172.35	55412.72	0.833244605
3-Methylglutaric acid	0.715354	46172.35	55412.72	0.833244605
3-phosphoglycerate	0.261431	26836.89667	83709.7	0.320594826
4-hydroxy-3-methylbenzoic acid	0.295867	35093.3	21450.05333	1.636047214
4-Methylvaleric acid	0.89555	572931.0333	540511.7667	1.059978836
5'-Methylthioadenosine	0.134965	34041.49333	60068.58333	0.566710441
5-Phenylvaleric acid	0.851806	42810.10667	39018.11667	1.097185367
6-Dimethylaminopurine	0.103212	194679.3667	134187.9	1.450796731
6-phospho-D-gluconate	0.044372	5929.192333	18108.23333	0.327430745
acetoacetate	0.154119	467958.2333	622887.6667	0.751272273
acetyl-CoA	0.247122	0	2072.891667	0
acetylphosphate	0.274745	22715.04	32065.96	0.708384842
aconitate	0.234984	151376.0833	308556.8667	0.490593792
adenine	0.347691	183039.5	263472.0667	0.694720705
adenosine	0.503663	422853.2333	560022.1667	0.755065172
Adipic acid	0.715354	46172.35	55412.72	0.833244605
Adonitol	0.000585	7356.279	18149.46667	0.405316538
ADP	0.079153	67440.19	123260.0333	0.547137528
ADP-D-glucose	0.25347	47662.96333	83192.00333	0.572927222
a-ketoglutarate	0.161318	178103.8	276413.1	0.644339215
Ala-Ala	0.113053	3887.034667	5807.271	0.669339293
alanine	0.00433	7180345.333	14314296.67	0.501620548
allantoin	0.927355	28816.786	27294.27667	1.055781267
Amino adipic acid	0.158815	13701.99067	22843.59333	0.599817659
Aminolevulinic acid	0.090127	504577	930949.3667	0.542002624

Aminomalonic acid	0.073391	608.4050667	3377.842333	0.180116479
AMP	0.727267	790671.1333	642305.0333	1.230990094
anserine	0.144469	0	122067.7	0
Arachidic acid	0.207778	1395498	3439210.467	0.405761152
arginine	0.008593	261685.4667	705632.1	0.370852554
asparagine	0.016607	92222.15	243175.9333	0.379240448
aspartate	0.005164	6541242.333	16283826.67	0.401701791
Aspartyl-L-phenylalanine	0.051417	3811.328667	9011.147667	0.422957076
ATP	0.063943	14337.56	26739.58	0.536192416
b-alanine	0.00433	7180345.333	14314296.67	0.501620548
betaine	0.013961	383349.1667	738175.9333	0.519319514
biotin	5.14E-05	0	885.5640333	1.13E-05
carnosine	0.022277	2383342.333	8175944	0.291506685
CDP	0.411237	853.3243667	1711.959667	0.498448873
cellobiose	0.347265	405706.6333	287488.1333	1.411211756
cis-urocanic acid	0.760589	62147.02667	51259.41667	1.212402144
Citramalic acid	0.004746	389291.1	967221.8667	0.402483767
citrate	0.163716	316213.8333	1500840.5	0.210691165
citrulline	0.237658	11864.64933	17321.64333	0.684960953
CMP	0.032176	46509.31	96603.54667	0.48144516
coenzyme A	0.966894	3700.067	3595.179	1.029174625
creatine	0.005677	4183962	7913711.667	0.528697807
Creatinine	0.01666	56109.51333	121223.6333	0.462859525
Cyclic-ADP-ribose	0.008527	3683.156333	12834.51533	0.286972763
cyclic-AMP	0.004543	5347.067	12435.68	0.429977854
cystathionine	0.033892	29016.56833	92449.40667	0.3138643
Cysteine-glutathione disulphide	0.062323	344978.9667	1286119.267	0.268232485
Cystine	0.015097	65560.38667	242756.3	0.270066675
cytidine	0.00902	10746.48267	15183.45	0.707776076
D-Arabitol	0.000585	7356.279	18149.46667	0.405316538
dCMP	0.007308	409.2483333	5984.434667	0.068385463
Dehydroascorbic acid	0.018517	11498.51667	30519.91	0.376754606
deoxyinosine	0.004103	3494.736	8416.508333	0.41522397
deoxyuridine	0.675656	16827.917	14085.13	1.194729264
dephospho-CoA	0.001242	18482.747	82109.07333	0.225099934
D-erythrose-4-phosphate	0.811102	3484.901333	3979.982	0.87560731
D-Fructose	0.285419	4541.163667	6635.387333	0.684385619
dGDP	0.079153	67440.19	123260.0333	0.547137528
D-glucono- ϵ -lactone-6-phosphate	0.103274	14664.566	21753.32	0.674130018
D-glucosamine-6-phosphate	0.006062	20281.79	30354.54667	0.668163166
D-glyceraldehyde-3-phosphate	0.002414	73921.54	269318.5333	0.274476246
dGMP	0.727267	790671.1333	642305.0333	1.230990094
dihydroxy-acetone-phosphate	0.002414	73921.54	269318.5333	0.274476246
DL-Arabinose	0.438322	3717.696	8192.993667	0.453765272
D-mannose 6-phosphate	0.033012	4262002.667	8810896	0.483719552
D-sedoheptulose-7/1-phosphate	0.015681	255119.7667	768454	0.331990941
dTDP	0.008648	9313.105667	55256.96333	0.168541757
dUMP	0.902723	15457.63333	15889.95667	0.972792668
D-Xylose	0.488342	8047.249	19673.72933	0.40903526
elcosapentaenoic acid	0.023332	1629449	4408517.333	0.369613835
FAD	0.018094	77560.21667	197938	0.391840964
FMN	0.023869	3365.0549	12749.779	0.263930449
fructose-1-6-bisphosphate	0.005036	54984.26333	294831.6333	0.186493772

fructose-6-phosphate	0.033012	4262002.667	8810896	0.483719552
fumarate	0.046029	974570.7	1764039	0.552465507
Galacturonic acid	0.024545	4606.326	8464.049333	0.54422249
GDP	0.015311	22421.32333	58344.43	0.384292439
glucose-1-phosphate	0.033012	4262002.667	8810896	0.483719552
glucose-6-phosphate	0.033012	4262002.667	8810896	0.483719552
Glutaconic acid	0.30304	72390.21667	136211.46	0.531454671
glutamate	0.013958	11044842.33	22351583.33	0.494141384
glutamine	0.63076	9337152	11873943.33	0.786356456
Glutaric acid	0.956701	67647.37	66017.39667	1.024690058
glutathione	0.010613	35839.37333	134991.8233	0.26549292
glutathione disulfide	0.17063	353538.6333	649338.2	0.544459934
glycerate	0.046001	13314.53767	43145.03667	0.308599521
Glycerophosphocholine	0.626499	71015.03333	84712.21333	0.838309265
glycine	0.022099	933350.2333	2293335.333	0.406983758
glycolate	0.34929	311200.1333	416521.1667	0.747141222
Glycyl-L-leucine	0.023293	2509.478333	5540.224667	0.452956059
Glycyl-L-tyrosine	0.011648	14598.14667	41180.09667	0.354495202
glyoxylate	0.011222	69333.48667	113526.0333	0.610727642
GMP	0.067078	747333.6	1335441	0.559615588
GTP	0.184159	629.7895333	1414.459633	0.445250977
Guaiacol	0.361286	8334.032	14126.75333	0.589946735
Guanidoacetic acid	0.196395	3188.650333	5172.199667	0.616497919
guanosine	0.016968	1410569.667	3216161.333	0.438587969
Homocarnosine	0.005992	4458141.667	17237496.67	0.258630459
homoserine	0.003272	53538.53	244385.8	0.219073817
Hydroxyindoleacetic acid	0.126351	2740.958667	7454.480667	0.367692773
hydroxyproline	0.090127	504577	930949.3667	0.542002624
Hypotaurine	0.373901	0	309.1507333	0
hypoxanthine	0.006841	4863196	9869963	0.492726872
IDP	0.025315	8841.269667	22418.32	0.394376995
Imidazoleacetic acid	0.47154	11680.05667	15007.73133	0.778269307
IMP	0.821708	118779.39	131159.5333	0.905610038
Indole-2-carboxylic acid	0.167641	2318.096767	6452.980333	0.35922886
Indole-3-acetaldehyde	0.266894	60539.08667	41947.99667	1.443193751
Indole-3-lactic acid	0.943197	2565.338667	2303.882333	1.113485107
inosine	0.006553	26457163.33	63733136.67	0.415124137
isoleucine	0.008241	291123.6667	605267.4	0.480983556
ketoleucine	0.202881	334921.5667	239646.8667	1.397562886
lactate	0.049508	39021036.67	62486486.67	0.624471606
Lactose	0.347265	405706.6333	287488.1333	1.411211756
L-Cysteic acid	0.547302	2117.123333	2792.635667	0.758109394
leucine	0.009071	1243246.667	2723996.667	0.456405355
leucine	0.009071	1243246.667	2723996.667	0.456405355
L-Fucose	0.133966	4725.643333	18603.132	0.254024072
L-Hydroxyproline	0.012403	229809.9	787497.8667	0.291822886
Linoleic acid	0.000573	17323293.33	31544226.67	0.549174767
Lipoic acid	0.036888	35543.084	189841.5667	0.187224983
L-Rhamnose	0.295101	5672.520333	10761.64667	0.527105239
L-Threonic acid	0.004624	207363.3	736165.6333	0.281680223
lysine	0.008829	47218.04333	164176.9333	0.287604613
malate	0.02297	4850185.333	8582737	0.565109397
Malonic acid	0.686768	703586.3667	878466.2333	0.800925909

Mandelic acid	0.345484	18622.28	12843.2	1.44997197
mannitol 1-phosphate	0.031829	2610.367667	10558.45367	0.24723011
Mannose	0.420633	19509.36667	27609.80333	0.706610128
methionine	0.004167	104187.24	315406.6	0.330326759
Methionine sulfoxide	0.314838	3840.751667	5694.501333	0.6744466725
Methylmalonic acid	0.203377	1388631	1758649.333	0.789600845
Mucic acid	0.007329	4048.033667	11471.84167	0.35286694
Muramic acid	0.011332	4893.103667	29781.71333	0.164298931
myo-inositol	0.004041	2462633.667	6888276.667	0.357510853
Myristic acid	0.237902	28784733.33	41243346.67	0.697924287
N-Acetylaspartic acid	0.068741	31249116.67	59385036.67	0.526211962
N-acetylcysteine	0.147605	2602.454	7366.260333	0.353293786
N-acetyl-glutamate	0.011049	90836.97667	279338.9333	0.325185521
N-acetyl-glutamine	0.695011	11332.89533	8766.738	1.292715185
N-Acetylglycine	0.028021	13389.49333	16426.61667	0.815109624
N-Acetyl-L-alanine	0.012403	229809.9	787497.8667	0.291822886
N-Acetyl-L-arginine	0.52159	2640.556333	3211.402667	0.822243925
N-Acetyl-L-asparagine	0.380725	10383.1	12254.03333	0.847321018
N-Acetyl-L-methionine	0.021624	37910.03667	79300.19	0.478057325
N-acetyl-L-ornithine	0.747215	1756.905333	2173.523	0.808321482
N-Acetyl-L-proline	0.342098	7259.524667	11040.255	0.657550452
N-Acetylneuraminic acid	0.009178	114880.7133	391491.7	0.293443548
N-Acetyltyrosine	0.53442	1702.025667	1325.1088	1.284442203
NAD+	0.077612	4193.755333	11013.689	0.380776626
NADH	0.373901	1110.665333	0	#DIV/0!
NADP+	0.172353	1386.067333	3848.985333	0.360112397
N-Formyl-L-methionine	0.012408	6076.024333	11817.52	0.514153929
nicotinamide	0.089957	385657.3	695595	0.554427936
N-Methyl-D-aspartic acid	0.013958	11044842.33	22351583.33	0.494141384
O-acetyl-L-serine	0.092865	38036.62	76272.25333	0.498695375
O-Phosphorylethanolamine	0.04073	752818.3333	1834410.333	0.410387098
orotate	0.425896	19838.248	10584.91633	1.874199793
pantothenate	0.014651	544399.5667	994435.1	0.547446049
phenylalanine	0.068375	444824	821311.1667	0.541602279
Phenylglyoxylic acid	0.913831	37764.64333	35697.49667	1.057907329
Phenyllactic acid	0.573653	27646.88333	21472.40333	1.287554211
phosphocreatine	0.373901	0	195.0815667	0
phosphoenolpyruvate	0.464635	2717.929	15138.15667	0.179541609
Phosphorylcholine	0.028178	2923.683	5520.936333	0.52956289
Pimelic acid	0.822784	30462.16	33912.64333	0.898253778
Pipecolic acid	0.001724	1552.479333	4811.227333	0.322678441
proline	0.008886	267401.1667	687490.8667	0.388952319
pyridoxamine-5-phosphate	0.000258	8870.145333	38796.45	0.228632912
Pyroglutamic acid	0.025409	2251951	4778705.333	0.471247094
pyruvate	0.117741	433515.4333	691034.8	0.627342405
Retinoic Acid	0.083157	99712.03333	1843198.833	0.054097275
riboflavin	0.020271	5175.973667	17813.36	0.290566949
ribose-5-phosphate	0.017062	343704.8667	1119994	0.306880989
Ribothymidine	0.00058	18545.33333	34951.95	0.530595098
Saccharic acid	0.007329	4048.033667	11471.84167	0.35286694
S-adenosyl-L-homocysteine	0.001848	44653.41667	144942.9667	0.308075774
sarcosine	0.00433	7180345.333	14314296.67	0.501620548
Sebacic acid	0.992399	30977.03	30893.18	1.002714191

serine	0.005855	464532.3333	1070569.067	0.433911597
shikimate	0.795562	12344.66667	14216.44133	0.868337327
sn-glycerol-3-phosphate	0.196257	31020.38333	45347.39	0.684061053
Stearic acid	0.210917	87888880	179133420	0.490633629
Suberic acid	0.664074	24557.51	18324.935	1.34011444
succinate	0.203377	1388631	1758649.333	0.789600845
sucrose	0.347265	405706.6333	287488.1333	1.411211756
taurine	0.00839	9314490	16581930	0.561725324
thiamine-phosphate	0.042914	559.6674333	1879.254333	0.297813565
threonine	0.003272	53538.53	244385.8	0.219073817
thymidine	0.920526	14374.58567	13136.759	1.094226184
trehalose-6-Phosphate	0.063659	7716.897667	36706.58	0.210231998
Tricarballic acid	0.350054	56359.83	125877.2067	0.44773658
tryptophan	0.029035	48983.96333	184078.4333	0.26610376
tyrosine	0.023045	47227.72333	210951.7	0.223879321
UDP	0.004466	4034.147333	2072.762333	1.946266231
UDP-D-glucose	0.014532	364719.2333	961421.1667	0.379354279
UDP-D-glucuronate	0.698972	30624.76333	36594.95333	0.836857559
UDP-N-acetyl-glucosamine	0.079183	862733.9333	1584307	0.54454972
UMP	0.903486	47009.88667	49959.83333	0.940953633
Undecanoic acid	0.668481	303757.6333	374720	0.810625623
uridine	0.005085	3214379	8024239	0.400583657
valine	0.013961	383349.1667	738175.9333	0.519319514
xanthine	0.000431	1211219.067	3129421	0.387042545
xanthosine	0.014296	7401.042	21152.31	0.349892849
xanthosine	0.014296	7401.042	21152.31	0.349892849
xanthosine-5-phosphate	0.146928	2297.528167	4006.68	0.573424423