

## Table of Content

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### • Supplementary Table S1

**Table S1 shows significantly altered metabolites of LUHMES cells (day 8 of differentiation) treated for 24 h or 36 h with 5  $\mu$ M MPP<sup>+</sup>, respectively**

significant metabolites (Benjamini-Hochberg false discovery rate (FDR) corrected,  $p < 0.05$ ) of 4 independent experiments

displayed are:

- Compound name: compound name of identified metabolites were assigned dependent on their determined mass by the MassHunter Acquisition software (Agilent Technologies) and are displayed in alphabetical order
- RT = retention time determined by either the TARGA® (Higgins, Mountain View, CA) C18 column (reverse phase separation) or the Cogent Diamond Hydride™ (MicroSol, Eatontown, NJ) column (aqueous normal phase (ANP)), respectively
- determined mass and formula of metabolites of the HPLC-MS system

### • Supplementary Table S2

**Data on Affymetrix DNA microarrays of LUHMES cells (day 8 of differentiation) treated for various exposure times with 5  $\mu$ M MPP<sup>+</sup>**

significant PS (Benjamini-Hochberg false discovery rate (FDR) adjusted LIMMA t-test,  $p < 0.05$ ) clustered according to the Pearson's correlation of their expression values across samples (cluster 1 to 4)

displayed are for every cluster:

- gene names of significantly regulated PS in comparison with control
- the corresponding fold changes of the PS ( $< 1$  = down regulated;  $> 1$  = up regulated)

### • Supplementary Table S3

**Data on RNA sequencing analysis of LUHMES cells (day 8 of differentiation) treated for various exposure times with 5  $\mu$ M MPP<sup>+</sup>**

significant genes (Benjamini-Hochberg false discovery rate (FDR) adjusted  $p < 0.05$ , fold change cutoff  $> 2$ )

displayed are:

- gene names of significantly regulated genes in comparison with control for every timepoint
- the corresponding p-values together with the FDR corrected p-values (in case the corresponding gene was not expressed in controls the p-value is 0)
- the corresponding fold changes of the genes ( $\log_2 < 1$  = down regulated;  $> 1$  = up regulated)

### • Supplementary Table S4

**GO term analysis of significantly regulated genes (Cluster 1 to 4) determined with Affymetrix DNA microarray analysis**

displayed are for every cluster:

- GO terms with a group size less than 1000 genes and a p-value  $< 0.05$

### • Supplementary Table S5

**GO term analysis of significantly regulated genes determined with RNAseq analysis**

displayed are:

- GO terms with a group size less than 1000 genes and a p-value  $< 0.05$

Compound Name	RT	Mass	Formula	Ctrl_01	Ctrl_02	Ctrl_03	Ctrl_04	MPP+ 24hr_01	MPP+ 24hr_02	MPP+ 24hr_03	MPP+ 24hr_04	MPP+ 36hr_01	MPP+ 36hr_02	MPP+ 36hr_03	MPP+ 36hr_04
Adenine	2.1781995	135.05477	C5H5N5	40607.45	58925.195	77722.266	53540.266	78978.414	84872.44	78455.95	72408.984	102521.36	105978.914	88122.164	104451.66
ADP	9.723	427.0298	C10 H15 N5 O10 P2	360538	318038	349372	317035	755968	600269	665181	457860	416674	593621	599007	513975
AMP	12.434957	347.0626	C10H14N5O7P	75381.45	67980.31	68211.76	74099.39	142836.7	113618.695	100026.44	104293.26	158904.73	137167.92	98644.41	107707.33
ATP	11.505	506.9963	C10 H16 N5 O13 P3	1806769	1878634	1979811	1974819	1622099	1414853	1751798	1520377	959200	1163486	1229920	1169729
Cholesterol sulfate	1.3367423	466.29253	C28H38N2O4	185089.08	142140.36	179658.03	218829.11	212582.8	162288.72	176680.7	201570.92	299953	275049.28	250498.53	397019.38
Creatine	10.577028	131.06946	C4H9N3O2	42126.69	26476.578	31364.496	34543.758	67844.31	61893.062	44136.414	51768.105	58392.805	80867.32	69146.12	67564.086
Cyclic ADP-ribose	11.485415	541.0605	C15H21N5O13P2	56026.418	68471.76	70421.81	74199.84	53886.492	47011.895	51683.332	44601.76	40287.14	50420.332	51128.613	43550.008
Decanoic acid	1.6112002	172.14618	C10H20O2	85791.48	140094.03	141233.66	121607.125	110419.83	79033.28	95197.01	83774.05	65347.363	77575.14	56458.395	75893.79
Dehydroascorbate	7.2823024	174.01546	C6H6O6	99658.04	131044.66	144882.72	189709.2	35411.38	16704.885	36309.332	23490.172	7727.3574	6110.7964	4931.632	1782.0905
Deoxyribose	2.6722124	134.05797	C5H10O4	3714.784	1401.348	1971.2908	2438.527	100530.58	115010.95	63571.395	73784.47	14645.808	60875.766	38806.824	65451.74
Deoxyuridine	3.370509	228.08425	C9H12N2O5	365860.8	270048.44	269572.28	494981.25	69955.45	77444.74	100827.516	14982.2295	143163.34	149336.11	68868.984	68331.56
D-Erythrose	2.6886003	120.042865	C4H8O4	320919.2	285411.1	215730.28	261257.72	96153.24	111526.55	98851.26	104913.64	102294.305	86490.81	51532.74	97273.47
D-Glucose	4.826493	180.06346	C6H12O6	1.38E+07	1.20E+07	1.18E+07	1.30E+07	9897048	7425680	3589317.5	7739301.5	5120492	4354011	3561507	3569824.8
Dihydropteroate	10.162604	314.1199	C14H14N6O3	9527.617	2715.2349	317.15	9527.617	93628.96	43888.73	23479.592	36642.12	26453.123	55552.156	28073.357	51371.992
Formyl-N-acetyl-5-methoxykynurenamine	23.817293	264.10466	C13H16N2O4	67351.44	120978.36	89555.02	142495.11	379972.2	401840.7	361116.28	347136.66	113237.54	252562.77	153243.52	167437.44
Glutathione	10.6726675	307.08354	C10H17N3O6S	1867814.1	1613400.2	1777952.1	1674870.6	874413.5	671047.25	990454.8	709436.75	720626.7	642681.4	670754.75	527599.06
Guanine	2.4088476	151.00191	C5H5N5O	1018317.1	820260.7	728080.1	866756.6	824613.1	843096.8	927543.94	814570.3	598873.8	479639.75	452681.16	594494
Inosine	6.8681207	268.0794	C10H12N4O5	18818.82	12790.485	39622.48	35664.176	5765.666	5715.9688	13983.504	7488.7207	4641.0454	4196.2485	15027.879	2778.881
L-Alanine	9.489417	89.04823	C3H7NO2	1034660.25	1006553.44	999091.75	1108385.4	948243.7	756566.75	844435.06	761661.94	608824.3	639601.3	613329.3	544507.94
L-Arginine	23.138628	174.11176	C6H14N4O2	60722.188	64665.105	71004.28	73002	175977.98	148180.19	143749.39	123128.91	174912.11	207335.97	181636.16	202685.67
L-Asparagine	12.200896	132.05374	C4H8N2O3	126552.95	113776.19	198501.14	148497.6	196609.95	107498.99	106585.914	98206.414	14731.561	64383.266	45822.434	31869.273
L-Cystathionine	2.9496076	222.0197	C7H14N2O4S	63233.645	193777.6	212602.56	187926.03	1329132.6	1374997	1208704.5	1593119.4	1296536	1418606.2	1319542.1	1330715.8
L-Glutamate	10.226167	147.05391	C5H9NO4	1.01E+07	9216675	9923687	9854769	5601552.5	4977763.5	6259856	5012702.5	4366909.5	4346674	4452911.5	3396162.2
L-Lactate	2.9537504	90.03222	C3H6O3	1.72E+07	1.98E+07	2.23E+07	1.96E+07	5.33E+07	4.58E+07	3.98E+07	4.13E+07	4.99E+07	4.84E+07	3.79E+07	5.77E+07
L-Lysine	23.748032	146.10576	C6H14N2O2	101994.32	117121.414	120259.88	134159.89	247120.4	236044.6	204651.31	187567.73	208855.39	268343.97	213859.83	240677.66
L-Methionine S-oxide	4.358	165.0463	C5H11NO3S	38107	51345	61278	80709	203000	173972	172572	136208	160540	189848	187255	181051
L-Phenylalanine	6.768417	165.07913	C9H11NO2	2089258.5	1813205.8	1975657.5	2071265.6	3267437.5	2615317.5	2774696.8	2463539	2685109.2	2927524	2664104.5	2635191.8
L-Proline	10.2196665	115.06374	C5H9NO2	646367.4	536469.2	537908.56	609392.25	559182.5	424750.7	442680.16	418559.2	453294.25	476266.2	449878.12	459828.5
L-Serine	10.010499	105.0431	C3H7NO3	349185.34	287490.44	283750.38	353662.34	475505.66	356135.4	404336.8	346832.9	261588.72	306065.2	267956.88	226886.52
L-Tryptophan	6.4051666	204.08982	C11H12N2O2	506895.9	415345.3	466814.44	467882.4	868277.56	669713.5	741179.75	619144.75	729658.9	784930.3	720356.1	667618.25
L-Tyrosine	6.929176	181.07373	C9H11NO3	1862030.8	1538403.4	1629637.2	1686151	2753602.8	2193538.8	2323320.2	2049571	2286956.5	2380934.5	2177387	2111619.8
Maleamate	9.544883	115.0272	C4H5NO3	80365.7	82927.21	95897.12	81837.836	76620.96	65992.17	79353.88	70288.61	58737.59	50493.52	66178.3	39664.195
N-Acetyl-L-aspartate	9.540916	175.0484	C6H9NO5	1.18E+07	1.13E+07	1.25E+07	1.18E+07	1.00E+07	7920360	1.00E+07	7963129.5	6985687	6678941.5	7448899.5	4844487.5
N-Acetyl-L-glutamate	9.6699915	189.0638	C7H11NO5	155744.19	128450.31	167225.77	142205.3	191509.81	132000.42	117790.62	130086.43	107706.1	85702.02	119736.336	58279.754
O-Acetyl-L-homoserine	3.8069165	161.06884	C6H11NO4	289241.47	341635.3	346845.7	332162.62	192073	273951.47	250863.52	281677.22	203413.22	229528.69	251971.44	209584.77
O-Acetylneuraminic acid	5.2280836	309.10567	C11H19NO9	481787.03	456668.5	631966.56	595101.75	692910.94	607542.44	1029919.44	741259.8	333617.1	206266.28	147377.98	216954
Pantothenate	4.300334	219.11072	C9H17NO5	8346518.5	9565469	959150	3793239	6526578	7123547	6228088.5	4139945.2	5301758.5	5311570	4836388	
Phosphocreatine	14.838637	211.03563	C4H10N3O5P	84803.43	96685.18	90541.945	114900.93	7423.1445	19684.762	25701.691	23664.252	7370.3477	6794.3467	639.1396	3328.3486
Pyruvate	2.9562547	88.01653	C3H4O3	9851.836	32774.375	10161.3545	43575.984	121153.75	124921.25	102119.664	105626.664	108890.414	124112.95	113716.97	129545.89
S-Adenosyl-L-homocysteine	6.911	384.1278	C14 H20 N6 O5 S	55675	50046	44906	88516	85255	88516	62561	83277	58890	77735	38938	90307
S-Adenosyl-L-methionine	2.779	398.1363	C15H22N6O5S	93447	132966	130589	88683	266547	284441	283516	296903	260733	253557	154246	296538
S-Methyl GSH	12.328221	321.0693	C11H19N3O6S	629013.2	752099.6	724681.75	770441.6	788880.06	769169.7	762900.8	789882.2	514164.62	670876	572745.7	594404.44
sn-glycero-3-Phosphoethanolamine	11.822831	215.05585	C5H14NO6P	797250.75	601546.94	569640.9	602335.25	471181.97	324394.53	350381	343490.88	478407.8	389354.3	321441.3	366071.16
Sorbitol	3.5053332	182.07923	C13H11O0	2.20E+07	1.69E+07	1.69E+07	3.02E+07	9236348	6603022	8343833.5	4049342.8	1.01E+07	1.03E+07	7519059	5852104
Taurine	4.885	125.0153	C2 H7 N O3 S	71391	46737	59527	56311	43142	30612	42536	34219	41658	28473	41357	28304
Thiamine acetic acid	3.109751	279.09947	C12H15N4O2S	67333.02	67835.75	69488.03	55950.332	139756.08	126292.14	147104.3	97391.9	140063.52	135186.78	118627.766	142601.66
UDP-alpha-D-galactose	7.450355	566.05474	C15H24N2O17P2	2060203.8	1543532.2	2952886.8	1351755.5	298676.22	220119.17	216542.4	190657.22	169850.31	121474.18	163083.44	51489.754
UDP-glucose	7.430962	283.02855	C15H24N2O17P2	346245.56	363072.2	404863.6	353609.1	64305.54	48714.906	55290.58	35299.902	25774.486	18699.396	13707.843	9857.748
UDP-N-acetyl-D-galactosamine	7.6207376	303.54088	C17H27N3O17P2	846070	672672.6	744038.3	735078.56	391983.62	434384.84	580545.25	324935.3	568335.06	541702.94	620861.3	452233.44
UDP-N-acetyl-D-Glucosamine	7.6651073	607.0812	C17H27N3O17P2	7376378.5	4276028	1.14E+07	5088489.5	2432887.2	800899.44	2534102.2	772613.9	437506.8	1298282.6	3328190.2	914853.3
Urate-3-ribonucleoside	6.408447	300.0776	C13H16O8	39090.957	46053.11	51405.406	44171.78	86029.45	59865.348	69050.055	55793.58	70858.85	71822.47	66285.45	66174.09
2,3-Dimethylmaleate	2.6667614	144.04251	C6H8O4	42628.082	38130.625	35829.625	35280.055	5254.236	5944.4795	7813.291	5304.854	13772.049	11707.922	5092.716	10738.02
2,5-Dioxopentanoate	7.448839	130.02747	C5H6O4	78220.85	94884.09	101088.164	110651.86	66482.32	54311.074	65209.285	32749.123	6659.6245	8320.937	14100.248	6993.9663
2-Acetolactate	9.812925	132.04303	C5H8O4	18777.96	5291.098	5428.676	2601.509	106356.55	125830.21	113057.625	127384.61	45780.613	60006.535	38237.223	53201.707
3-(4-Hydroxyphenyl)lactate	1.9337083	182.0581	C9H10O4	60591.79	43946.316	52934.535	55151.31	229440.75	303302.75	215976.67	255865.56	194081.33	260543.95	166126.52	228082.89
3-Methyl-2-oxobutanoic acid	1.9347128	116.0478	C5H8O3	5558.974	6629.779	5284.111	1512.1465	67625.28	100198.57	74112.445	94388.24	78841.77	81506.74	29836.568	102588.016
3-Oxopropanoate	4.8347306	88.01668	C3H4O3	88921.23	134018.16	1									



Compound Name	RT	Mass	Formula	Ctrl_01	Ctrl_02	Ctrl_03	Ctrl_04	MPP+ 24hr_01	MPP+ 24hr_02	MPP+ 24hr_03	MPP+ 24hr_04	MPP+ 36hr_01	MPP+ 36hr_02	MPP+ 36hr_03	MPP+ 36hr_04
133.01398@11.78093	11.780929	134.02178		145448.5	759588.25	350900.75	568475.56	17615.268	28450.744	30891.262	39011.93	206.59311	943.7443	145.28394	278.555
134.86569@1.8863314	1.8863314	135.87349		106264.63	101538.09	106769.266	116406.29	132684.12	105106.54	127180.336	102582.22	139226.9	138657.23	167002.2	127326.46
136.86316@1.885491	1.8854905	137.87096		39994	42091.38	37412.86	44599.125	40456.812	39104.14	48635.96	38844.75	55099.38	46440.914	65738.83	55357.855
146.07918@4.65306	4.65306	147.08698		113441.47	163448.77	113192.195	211388.22	65001.105	47331.01	59251.71	43540.992	52913.574	65299.297	96682.4	95968.15
146.0796@4.255173	4.255173	147.0874		199176.06	217813.31	205613.22	262262.16	74446.49	127735.81	101418.18	102392.34	81883.55	109147.945	96682.4	85111.47
146.15578@10.225205	10.225205	147.16358		239808.64	212390.23	228652.78	232361.67	96644.836	82153.09	101228.17	80464.625	72160.64	72742.984	74398.125	58316.36
146.19092@10.229674	10.229674	147.19872		52036.305	46831.785	48187.105	50405.258	34740.09	28435.377	37085.406	29921.965	25856.43	26871.514	28276.205	20141.236
148.9902@2.9361804	2.9361804	149.998		12510.936	7692.444	9646.862	5849.9194	67097.15	57633.16	57802.49	64242.566	60105.902	70837.06	60275.293	59842.363
149.123@23.748415	23.748415	150.1308		244208.53	244049.66	233944.06	254467.16	312568.56	277332.2	311965.3	276621.22	243919.3	269472.28	238925.98	254056.6
160.06111@11.61873	11.61873	161.06891		3715.3687	5087.4707	10556.032	1178.6782	73533.695	68456.79	65162.465	69389.34	2025.4734	3903.6367	1008.8966	1479.6774
174.16072@9.546037	9.546037	175.16852		310093.56	287314.03	320939.72	298898.9	231813.25	168103.03	249667.44	187595.1	149905.48	154272.38	164194.27	97926.73
174.20001@9.55398	9.55398	175.20781		78907.805	78058.945	85012.52	82271.57	64591.48	56884.734	66163.125	59481.137	47699.754	44432.824	53221.746	31472.877
179.17754@4.807038	4.807038	180.18534		317854.38	250755	250798.66	278514	174227.77	120056.67	50170.062	124096.67	79753.54	63689.957	31784.76	47662.848
179.21667@4.8303084	4.8303084	180.22447		45079.805	71675	73805.305	79605.06	55874.184	39783.438	31670.758	39467.887	20917.53	1908.0164	8310.682	15137.455
180.97272@12.878853	12.878853	181.98052		464561.53	555557.44	426256.75	360854.2	268142.53	328295.2	283432.28	360287	265884.56	290494.2	309381.88	289631.06
180.97284@14.119446	14.119446	181.98064		482018.4	453430.22	457862.3	393876.16	350410	381364.16	366535.25	380934	402733.7	345724.88	307403.94	360206.34
186.04501@2.9447353	2.9447353	187.05281		17139.61	26333.908	20328.041	23627.41	135873.75	116720.79	123258.35	132390.69	113594.46	125199.44	150383.64	137169.55
187.0416@2.9380963	2.9380963	188.0494		99315.14	166153.86	185301.33	161204.61	671659.2	767328.75	859056	685848.5	614607	775773.94	791456.56	724566.06
188.09216@2.352192	2.352192	189.09996		12486.648	4681.312	6697.1206	10193.783	68656.43	79925.23	53089.414	85331.04	57046.457	36481.137	15341.999	11762.918
190.07056@3.1925395	3.1925395	191.07836		91135.43	103089.305	87697.75	98562.875	504265	369939.9	265918.75	486819.28	249889.38	283199.34	466907.38	291911.03
202.107712@2.3899403	2.3899403	203.11551		20691.4	7896.0825	21376.307	6691.0273	197591.28	174122.84	156434.34	194273.55	137558.75	125957.234	52261.184	119379.45
219.10556@4.5696263	4.5696263	220.11336		193131.3	306901.72	218708.86	322793.2	214678	255559.8	122278.1	307217.16	82471.484	104097.14	129472.234	83535.44
221.01193@4.832413	4.832413	222.01973		1315161	1078914.5	1170669.8	629030.75	864355.4	766683.3	800769.6	822931.06	556712.9	471633.88	269182.6	248211.2
223.02716@3.5645676	3.5645676	224.03496		136362.33	95820.516	125695.695	197171.75	11142.473	10186.89	5156.6616	5110.6836	5428.485	9284.536	1841.561	683.707
225.06111@4.8618326	4.8618326	226.06891		6262649.5	5727697	5634680	6003855.5	4699123.5	3712766.2	3806593.2	3846932.5	2934816.5	2520511.2	2132584.8	2034998.1
225.197@4.871625	4.871625	226.2048		74360.36	57548.934	58140.996	59848.15	64731.99	49305.88	54370.715	45041.67	31603.2	14328.921	24365.361	21418.861
232.00981@14.834886	14.834886	233.01761		81271.23	110880.57	133268.4	8172.37	29473.389	53110.137	20776.797	10391.617	4474.099	11253.6	5844.729	
236.09189@2.1470566	2.1470566	237.09969		10103.035	2360.7139	6435.6943	7079.8203	93693.57	104740.3	85770.99	121991	60407.406	80328.48	35190.73	57551.477
239.21689@4.7739596	4.7739596	240.22469		283624.38	229981.69	227627.94	255866.98	167387.25	43260.883	125317.64	47082.688	74534.22	59001.64	47155.05	47403.29
239.26306@4.786435	4.786435	240.27086		42593.992	75605.3	76026.266	83123.6	54795.16	38002.13	37575.125	41243.164	9714.089	23144.57	3054.1968	6388.7305
241.01132@5.7897344	5.7897344	242.01912		363062.6	242336.58	295011.12	266279	171134.06	65655.58	98559.766	67969.29	75802.43	30590.072	120244.15	11246.106
241.0369@3.54534	3.5453403	242.0447		146939.72	101623.53	120082.54	202229.06	42604.96	26000.918	32505.654	6797.1167	15677.782	13611.298	2931.6086	5379.9185
252.08844@2.3017325	2.3017325	253.09624		3086.79	1592.5511	1684.2839	4263.067	119281.02	85279.96	84783.586	80097.625	74726.03	81721.2	76245.375	53163.496
257.0773@5.6222796	5.6222796	258.0851		17840.146	10960.525	31249.375	10960.525	3984.214	74840.125	146396.9	53512.42	84101.875	72311.57	135286.31	38771.195
260.0588@6.769796	6.769796	261.0666		55043.023	43050.633	48211.44	38936.24	82355.54	57583.08	68232.58	56582.285	67722.28	68840.734	64959.957	58579.277
275.05325@2.9626772	2.9626772	276.06105		201321.83	333342.47	244644.03	374121.6	142154.1	200779.39	197000.83	196825.45	268105.1	372087.94	345419.97	350700.12
276.07486@2.8121698	2.8121698	277.08266		57248.19	78742.195	71435.82	62149.49	155120.58	174711.8	173628.42	190533.1	169401.84	167055.4	103484.695	197643.83
277.0706@2.8237498	2.8237498	278.0784		296612.5	368518.12	348123.5	315991.56	650595.75	717435.7	712825.9	826066.75	691550.44	685589.06	448094.4	842492.06
279.0591@5.89792	5.89792	280.0669		28491.928	26417.629	42986.39	27807.768	98613.09	114220.31	87213.26	72958.48	89561.15	74834.92	79786.195	90062.34
279.0882@3.115917	3.115917	280.096		344427.97	354979.84	349162.7	201993.75	676404.06	613660.56	775178	505879.34	673551.56	642711.6	566178.06	662359.4
283.11807@1.526591	1.5265914	284.12587		1526.8934	2397.801	2851.7942	9514.14	96226.75	19256.133	14363.082	12743.286	17329.713	29441.06	13359.855	19955.43
284.91522@12.675468	12.675468	285.92302		534.3179	2398.8057	1416.4226	459.46765	3203.7583	3874.0505	7870.1895	3062.6858	18213.84	6151.7007	51886.914	17074.816
285.07477@1.6001414	1.6001414	286.08257		2181.135	12097.206	20631.625	1140.9924	40519.355	59150.645	16890.863	39770.08	52859.125	39030.086	39862	49248.758
285.1162@3.4687908	3.4687908	286.124		34436.66	39670.402	42297.836	78750.84	20044.996	9107.471	4627.116	6744.252	19187.678	24577.102	7847.285	4316.6094
286.94736@8.590554	8.590554	287.95516		283432.38	212820.2	211258.94	200714.52	103244.625	75097.61	98363.55	141619.6	117544.35	107433.516	82140.234	105837.53
293.04947@4.8638577	4.8638577	294.05727		136146.36	206164.83	86172.336	215495.83	57984.86	97465.945	14398.495	146795.67	3612.7197	1556.2101	158.55548	1388.4454
293.0818@4.3396525	4.3396525	294.0896		4045.4177	15399.468	19921.545	112866.46	964.55426	5074.764	1245.1871	1880.9954	13249.0625	48139.75	39478.535	9364.482
294.88925@12.167702	12.167702	295.89705		6470.0205	10425.973	1811.9108	14079.683	50611.68	40040.906	39947.22	21258.654	70236.36	40841.7	46858	46035.156
296.87512@12.387673	12.387673	297.88292		34394.14	73405.75	35224.812	69603.49	90717.93	75720.29	86978.016	80135.19	94569.82	96984.98	88248.61	99439.91
297.0799@2.8554666	2.8554666	298.0877		2559.541	47679.703	60627.906	11657.92	134277.97	152029.58	118765.18	157702.97	140896.89	145277.94	83181.055	178732.69
298.98877@2.937507	2.937507	299.99657		5658.928	5700.609	4125.657	3520.4934	63278.043	70305.555	91481.44	103913.42	74402.89	72252.06	78301.914	66153.89
301.0064@3.5495532	3.5495532	302.0142		50861.94	48464.137	59296.094	115173.19	7912.4385	1007.51447	9740.502	3550.3215	11816.76	6212.1274	780.3208	281.7853
302.051@12.329162	12.329162	303.0588		223188.03	248113.56	231683.84	247348.9	259863.84	266309.94	260421.34	275260	166045.5	214618.3	176352.61	189754.72
302.0644@4.278878	4.2788777	303.0722		12250.911	32935.027	32997.164	35165.45	19523.871	10928.314	15948.139	10682.077	5001.1143	7769.372	3835.6682	7866.4575
302.10															



Compound Name	RT	Mass	Formula	Ctrl_01	Ctrl_02	Ctrl_03	Ctrl_04	MPP+ 24hr_01	MPP+ 24hr_02	MPP+ 24hr_03	MPP+ 24hr_04	MPP+ 36hr_01	MPP+ 36hr_02	MPP+ 36hr_03	MPP+ 36hr_04
332.0951@4.7153363	4.7153363	333.1029		274977.34	399616	282681.3	228253.98	131061.33	204595.17	178334.72	226939.8	49201.402	76144.78	81811.27	71430.086
334.88568@12.427764	12.427764	335.89348		13856.159	36439.46	25321.814	45080.06	71319.65	45484.684	59964.004	43128.234	60325.527	82666.53	106816.72	64866.82
339.1988@0.9208575	0.9208575	340.2066		262051.98	104123.7	187320.78	209796.2	82308.57	54446.773	111305.836	37248.23	653979.6	246715.95	300983.75	241647.03
347.14508@5.2234874	5.2234874	348.15288		24785.785	11308.341	9822.399	28425.025	20109.014	32479.547	55824.52	38933.125	10917.523	7789.398	3412.4739	12630.659
353.04794@0.9667501	0.9667501	354.05574		386441.94	708657.1	943937.7	772483	1228452.5	1237679.2	877197.6	1022053.56	1345852.4	1492704.2	1375586.5	1537270.4
357.1678@2.3088386	2.3088386	358.1756		1283689.2	1502185.8	1545945.4	1394603.2	770247.6	1258463	1456517.4	1992593.2	896341.94	661195.56	591465.5	827662.2
359.16547@2.3125074	2.3125074	360.17327		555272.1	624692	707366.3	629147.06	336539.2	716468.4	623034.7	703676.25	396412.28	289201.72	301462.78	353749.06
359.28937@4.844226	4.8442264	360.29717		39428.684	49582.727	50920.4	61340.246	24921.533	8739.697	14862.75	16128.913	2573.987	1069.4083	138.86655	332.07886
363.14877@3.7785633	3.7785633	364.15657		16766.244	8416.555	10397.993	51405.324	1573.054	2302.029	31091.73	3005.5835	1916.1415	905.0568	106.32394	844.22064
363.14932@4.2665257	4.2665257	364.15712		4427.7134	6275.3813	9023.641	9188.775	28846.15	46285.535	38584.348	37889.28	23423.238	38031.51	5308.1445	17463.992
365.15555@4.1830034	4.1830034	366.16335		217053.64	232181.11	236528.89	237430.23	62629.375	176066.1	237652.33	147718.42	81292.26	110661.984	78749.76	93782.02
366.10843@2.692629	2.692629	367.11623		21576.697	52294.082	30637.791	53807.25	12337.149	14196.009	12378.578	21209.152	2512.4277	11018.285	4752.2495	9320.393
368.91785@11.736878	11.736878	369.92565		51581.65	81342.445	46232.688	45606.33	135229.97	95314.38	102338.1	101948.22	57081.88	64252.332	74562.04	66877.1
368.9184@10.852309	10.852309	369.9262		39635.89	73999.02	33529.426	69940.39	154030.66	145474.4	129922.89	140063.92	112955.59	168994.77	178792.02	133226.34
373.0609@2.88944	2.8894403	374.0687		2606.414	18314.248	21981.395	31061.922	78575.85	139960.62	146583.42	209816.89	77193.164	50791.695	50600.934	100932.63
376.96664@4.8021092	4.8021092	377.97444		56373.727	9164.235	55473.188	41840.227	2840.2803	11924.485	17227.99	8876.04	1623.2882	2068.5515	1930.3658	700.15485
388.01233@11.82683	11.826829	389.02013		54003.707	46027.242	56644.754	36291.723	26325.26	8729.591	20924.14	9637.018	18031.955	9319.132	6592.008	1973.5638
388.1546@1.2126831	1.2126831	389.1624		620466.94	551579.1	520140.6	576642.9	910840.4	683714.9	726113.2	1044665.4	1241464.9	1100791.2	1496286.2	1143576.8
398.16534@4.819566	4.819566	399.17314		175140.61	183206.86	134135.25	304459.38	35803.695	57462.465	57735.65	65336.715	5660.3667	15900.322	5572.8076	8099.79
400.1801@4.2311444	4.2311444	401.1879		175065.58	80410.4	87420.25	322631.7	17411.625	30440.451	71158.3	20565.336	15358.076	42531.78	24470.258	11524.257
404.14795@1.202113	1.202113	405.15575		73084.65	54127.637	51533.74	61828.79	149491.17	104601.99	115992.55	151280.27	192862.1	171130.78	222049.7	120955.87
410.21985@1.002382	1.0023824	411.22765		124654.97	13742.56	5595.5737	362.48605	1	120.197876	14.28738	17.3678	109.38804	80.70621	6.6517763	80.4094
416.0966@11.389426	11.389426	417.1044		84351.945	92827.81	96051.96	104784.45	90042.39	72813.95	83140.56	74407.85	45583.016	40458.812	41407.22	41671.37
419.0858@4.8160663	4.8160663	420.0936		49547.184	40272.766	9455.145	32043.477	8545.782	3900.8647	9535.121	16695.121	4938.3135	1025.393	641.80945	228.02124
437.21283@4.304917	4.304917	438.22063		2010421.2	2617290.5	2384471.8	2986537.2	376375.38	1382174	1200197.1	1368581.8	432475.25	675952.9	402713.97	507718.9
438.8099@12.376152	12.376152	439.8177		11105.904	26527.277	20148.484	24174.61	45981.19	30342.062	42716.85	39496.27	33088.754	45040.887	44276.098	53067.67
445.18585@1.2730834	1.2730834	446.19365		468723.06	467540.22	464917.53	469446.47	423549.03	416242.53	423260.25	410304.34	437594.12	449593.6	471221.84	
445.1935@4.347508	4.3475075	446.2013		55439.234	60455.13	73626.43	59340.227	692.2607	14381.512	18494.283	2036.7146	8300.657	4389.332	15086.953	1584.8909
450.23355@5.431273	5.431273	451.24135		127555.23	141506.84	199622.89	143079.62	323302.8	300167.5	208486.25	250721.28	302564.38	255969.23	285649.8	233103.86
451.2357@5.4706874	5.4706874	452.2435		23713.045	30613.361	36147.965	31022.652	60183.5	82888.18	67609.18	73095.34	77183.3	30775.934	50931.613	64505.902
456.0444@2.7886012	2.7886012	457.0525		78220.94	108586.46	126061.195	129140.76	160704.45	167666.97	123832.805	120202.766	156880.19	197555.36	171391.27	204106.6
456.13745@2.8181832	2.8181832	457.14525		8899.136	14076.401	7770.727	11434.269	31321.701	37967.508	18959.703	32201.387	52225.836	35172.14	26517.254	44277.242
457.1361@2.8116906	2.8116906	458.1439		67941.805	91741.61	105199.74	72203.48	223341.27	239699.27	226335.88	265872.2	232474.56	218475.48	131261.28	243240.44
459.1902@4.2843447	4.2843447	460.198		41634.492	48079.91	60450.117	81226.84	1578.0024	37769.156	21304.23	36094.8	1755.7892	3700.2686	1197.7361	2680.333
463.28143@1.33525	1.33525	464.28923		513348.53	380517.06	544903.6	651724.25	625624.75	465335	547801.9	539103.7	880276.5	752116.6	739326.06	1089739.5
463.32605@4.8408036	4.8408036	464.33385		106404.37	146386.2	147062.7	93746.64	49050.824	58300.37	94850.414	57181.652	32434.75	25955.904	13638.225	18085.324
465.3414@3.520032	3.520032	466.3492		37765.44	28212.219	39780.51	65272.918	12151.507	3346.352	8145.9834	22268.842	7252.6543	5218.953	4659.9062	
468.12802@2.176746	2.176746	469.13582		1.11E+07	1.43E+07	1.85E+07	1.56E+07	1.87E+07	2.00E+07	1.60E+07	1.71E+07	2.25E+07	2.32E+07	1.87E+07	2.43E+07
468.31998@2.17741	2.17741	469.32778		309618.66	423314.25	590894.4	472400.03	641394.25	672603.7	514489.47	571616.25	759381.6	799751.7	637852.5	866692.7
468.39307@2.1770759	2.1770759	469.40087		109132.164	143448.27	209330.47	167741.06	217279.34	208974.2	171968.89	176825.61	260683.33	269562.88	230777.19	280522.97
469.98157@11.823563	11.823563	470.98937		75977.73	62934.023	63654.09	58283.75	20604.082	3989.9163	15041.678	2812.6594	9143.358	9129.368	11872.834	2988.4956
480.9519@14.040954	14.040954	481.9597		5964.16	33556.76	15941.198	30465.13	106126.9	47666.6	44814.332	27851.67	87323.96	121569.72	241703.64	94588.8
489.27448@0.897692	0.897692	490.28228		270522.62	173402.78	220390.98	221090.8	38900.805	37895.92	35789.184	41137.668	33706.13	28186.885	36583.8	39652.9
490.2952@1.9584527	1.9584527	491.303		93068.2	12606.798	5862.106	1608.7759	80.64749	85.47648	1	595.8856	1	67.88943	1	1
502.28458@6.8138223	6.8138223	503.29238		2787.9973	17487.742	3879.1802	16847.217	5523.6523	9984.574	17584.547	14892.539	41295.973	50946.953	64093.473	28168.447
526.87506@12.949448	12.949448	527.88286		607.90564	3917.6067	3428.4355	826.0315	5658.5938	5213.7466	7650.3286	3026.2893	20832.188	24240.164	43165.59	23744.6
533.1044@15.82401	15.82401	534.1122		2047.4991	1188.6613	1740.9573	1035.7941	25356.29	21468.328	15863.707	12667.011	59108.5	64574.96	56852.47	62360.64
579.0262@8.62867	8.62867	580.034		40973.293	48673.06	41026.184	43607.805	4800.3735	7796.6865	7305.0493	6106.502	1489.1572	12947.831	1000.3717	12095.786
587.0288@7.4247108	7.4247108	588.0366		122111.836	168650.56	134125.8	150037.4	21711.254	6257.6733	7907.9487	4833.6626	2027.4298	2543.0103	3131.4617	2799.5837
599.3189@3.332655	3.332655	600.3267		153102.11	157386.48	154350.05	86167.58	49575.46	86941.914	85207.34	60172.285	127452.25	118531.9	154841.56	186909.56
616.8468@13.165038	13.165038	617.8546		3061.9001	1745.8132	2405.1797	2164.6965	19933.783	9093.964	6047.01	4052.1328	29348.65	23263.545	33595.797	4916.9683
621.30316@2.7867737	2.7867737	622.31096		80380.05	75270.69	102509.46	74398.4	43589.082	22897.184	34275.688	32825.426	42686.72	23833.785	50067.14	37622.89
628.0552@7.634414	7.634414	629.063		253136.06	310481.44	165774.17	310040.7	133771.47	128932.28	163002.61	154920.27	153723.98	180346	146366.58	208988.67
662.101@11.485171	11.485171	663.1088		114662.76	143553.83	136200.44	155045.23	87509.12	89438.6	98906.4	79745.97	73924.36	93564.65	99714.38	87480.21
664.11646@8.408097	8.408097	665.12426		20259.166	46008.15										

Cluster 1				
gene names	probe names	fold change		
		contr.vs.24h	contr.vs.36h	contr.vs.48h
SH3KBP1	1553588_at	0.473033665	0.399529518	0.332807137
FAM13C	1554547_at	0.695214731	0.551365121	0.323110302
HNRPL	1554678_s_at	0.579149391	0.481436159	0.476937477
HNRNPM	1555844_s_at	0.488307322	0.429921419	0.373884252
LHX9	1562736_at	0.483039711	0.382685784	0.299411499
---	1562828_at	0.324111554	0.348398624	0.436055181
---	1568870_at	0.585616213	0.499196755	0.53870281
HNRNPM	200072_s_at	0.514911362	0.460679241	0.409534279
HSP90B1	200599_s_at	0.483362822	0.541489576	0.526377313
TXNIP	201008_s_at	0.299843815	0.362984704	0.335365829
TXNIP	201009_s_at	0.384895558	0.435930002	0.41640731
TXNIP	201010_s_at	0.242071405	0.313960284	0.277968869
BCLAF1	201083_s_at	0.581288973	0.550997903	0.393188384
BCLAF1	201084_s_at	0.645139872	0.599509735	0.427714471
BCLAF1	201101_s_at	0.621403017	0.650869473	0.462545346
PCNA	201202_at	0.601883261	0.567893042	0.426101196
TOP2A	201291_s_at	0.686670648	0.454984788	0.221560957
TOP2A	201292_at	0.682922303	0.436800986	0.1871374
SFPQ	201585_s_at	0.506138745	0.481193542	0.365800986
SFPQ	201586_s_at	0.461954013	0.447370733	0.388176833
SMC4	201663_s_at	0.77003523	0.609143705	0.443977288
SMC4	201664_at	0.678107589	0.575994773	0.415818999
ALCAM	201951_at	0.720179032	0.588583166	0.491532098
KIAA0101	202503_s_at	0.555640128	0.42623418	0.252814424
DHFR	202534_x_at	0.681619258	0.566306867	0.412241445
TYMS	202589_at	0.600165738	0.443126693	0.287167001
HIST2H2BE	202708_s_at	0.538687169	0.399914781	0.302078911
SFRS3	202899_s_at	0.483231021	0.536273619	0.445809206
NBN	202905_x_at	0.631942649	0.600319562	0.461663461
NBN	202907_s_at	0.653753443	0.62808253	0.476791136
UBE2C	202954_at	0.745322894	0.585577101	0.377050183
LMNB1	203276_at	0.782333349	0.632697831	0.405110219
UGDH	203343_at	0.736406831	0.639961968	0.47799878
MAD2L1	203362_s_at	0.536406024	0.404189053	0.283717978
NELL2	203413_at	0.788671378	0.510749113	0.33893854
APC	203527_s_at	0.604812734	0.649887808	0.455057456
ZWINT	204026_s_at	0.541022563	0.403401155	0.283245675
PROM1	204034_s_at	0.612168002	0.607704427	0.413166577
FLRT2	204359_at	0.699883791	0.443562216	0.276090521
LMO3	204424_s_at	0.387554017	0.270160423	0.158824346
FZD1	204451_at	1.010496041	0.67832869	0.452706443
VCAN	204619_s_at	0.695888644	0.508868702	0.430648228
TRA2A	204658_at	0.527247965	0.524343523	0.421071767
FEN1	204767_s_at	0.648408134	0.593528036	0.476397588
ING3	205070_at	0.603359943	0.636410402	0.497642394
NEFM	205113_at	0.797207264	0.581880653	0.498095552
GRIA2	205358_at	0.451457801	0.431339274	0.50469152
H2AFX	205436_s_at	0.81305098	0.614202585	0.46963401
BAI3	205638_at	0.627706357	0.600684863	0.482628783
PCDH17	205656_at	0.712372249	0.52571717	0.429766693
NOVA1	205794_s_at	0.668051957	0.542902433	0.448027208
JAKMIP2	205889_s_at	0.598382862	0.550396592	0.45884223
ELAVL4	206051_at	0.720719622	0.580165368	0.408930079
FUSIP1	206095_s_at	0.659703395	0.670626755	0.495723364
ISL1	206104_at	0.58762626	0.473950442	0.375633895
SFRS6	206108_s_at	0.606542053	0.549734211	0.484996556
MEOX2	206201_s_at	0.511008349	0.369194035	0.261076424
CENPF	207828_s_at	0.690202863	0.567690219	0.352223789
HMG2	208025_s_at	0.682116056	0.561972084	0.413324987
RBM3	208319_s_at	0.48030032	0.411058593	0.395059623
SFRS3	208672_s_at	0.549878976	0.583869195	0.496462136
SFRS3	208673_s_at	0.437624037	0.463529078	0.387152089
G3BP2	208840_s_at	0.583132085	0.614409403	0.482315136
DUSP6	208891_at	0.764583356	0.566762106	0.386038227
DUSP6	208892_s_at	0.675150889	0.491360662	0.326355237
ID4	209291_at	0.756658174	0.591531799	0.371152742
ID4	209292_at	0.606883838	0.480151075	0.295200822
HMMR	209709_s_at	0.679888355	0.577218228	0.407052576
HIST1H2BK	209806_at	0.641447032	0.654323081	0.440234817
LRRN3	209840_s_at	0.329212697	0.32410573	0.236899159
LRRN3	209841_s_at	0.333674352	0.327665922	0.238106112
SCN3A	210432_s_at	0.494458941	0.534241485	0.495817014
VCAN	211571_s_at	0.679707269	0.579776534	0.494654403
KCTD12	212192_at	0.735910816	0.548705787	0.437684433
PDCD4	212594_at	0.655866721	0.483219894	0.403694
SFRS12	212721_at	0.715526976	0.692726392	0.46103893
TCF7L2	212761_at	0.763326922	0.436781738	0.360369173
TCF7L2	212762_s_at	0.635858286	0.38217625	0.330285562
FUBP1	212847_at	0.457805122	0.489340986	0.544371308
CHN2	213385_at	0.823414152	0.532829014	0.377729135
PENK	213791_at	0.374505837	0.277450604	0.214569594
DCBLD2	213865_at	0.811768812	0.654282605	0.449727372
SST	213921_at	0.743806485	0.560957718	0.466812689
CDC42	214230_at	0.70171167	0.627605561	0.446682304
HIST2H2AA3 /// HI	214290_s_at	0.63403114	0.566394935	0.489088923
BCLAF1	214499_s_at	0.630311738	0.595977742	0.451730848
KLHL4	214591_at	0.454998573	0.471597775	0.399358379
CCNB1	214710_s_at	0.594610288	0.474876471	0.246977218

Cluster 2				
gene names	probe names	fold change		
		contr.vs.24h	contr.vs.36h	contr.vs.48h
CBS	1553972_a_at	2.051122153	1.771253477	1.538107153
LOC401074	1559827_at	1.789910935	2.18236887	1.875766261
---	1569372_at	2.117878501	2.549910115	2.016759209
WARS	200629_at	1.987739166	2.496299375	2.385250572
XBP1	200670_at	2.053507787	2.170385269	1.639377339
LITAF	200704_at	1.925989717	1.977528406	2.000688026
SARS	200802_at	1.890359024	2.101273744	1.871820731
SLC3A2	200924_s_at	2.983737054	3.021598753	2.659143002
AARS	201000_at	2.057841905	1.98158049	1.821113828
HAX1	201145_at	1.744467033	2.063385256	1.744027685
CSDA	201160_s_at	2.261869121	2.097966676	1.707066627
SLC7A5	201195_s_at	5.026104283	4.162306672	3.792081901
CREG1	201200_at	1.798172294	2.082656773	1.654279492
PHGDH	201397_at	2.824971429	2.699107055	2.219580568
NQO1	201467_s_at	3.584438934	4.710812806	3.259678247
NQO1	201468_s_at	3.208271551	3.347967133	2.385286115
IRAK1	201587_s_at	2.321210605	2.257982869	2.455096464
IFITM1	201601_x_at	1.628437149	2.248205881	2.211398448
CALD1	201616_s_at	1.836596079	2.068665455	2.100494312
MTXFD2	201761_at	2.529731984	2.409786884	2.08741749
CD55	201925_s_at	2.256917012	2.337279564	2.101487464
HEXB	201944_at	1.936886976	2.235770367	2.003720125
CTSL1	202087_s_at	1.984648867	2.339983407	2.205957772
TSPO	202096_s_at	1.543728151	2.079135705	2.568772273
IFRD1	202146_at	2.10362544	2.052451455	1.649653825
IFRD1	202147_s_at	2.184406004	2.355613912	1.839085057
CDKN1A	202284_s_at	2.33150898	2.646056639	2.420999935
ADAM9	202381_at	1.893118237	2.017394466	1.645361315
CARS	202402_s_at	1.934349525	2.239381134	2.045802118
DDIT4	202887_s_at	4.281728551	4.786414643	4.180953406
ITGB1BP1	203336_s_at	1.63733569	2.015274624	2.004697785
DUSP14	203367_at	2.080496489	2.17256158	1.658961189
MPST	203524_s_at	2.01109648	1.831345937	1.689982865
LOXL1	203570_at	2.512610391	2.418727797	2.434258734
RAB4A	203582_s_at	2.037847921	1.960905855	1.622628747
R3HDM2	203831_at	2.032631611	1.534512846	1.476029918
ARG2	203946_s_at	1.838824806	2.563210104	2.107255059
FZD6	203987_at	1.701558476	2.219483949	2.15939283
ME1	204059_s_at	2.033421684	2.411334168	2.129366188
PMAIP1	204285_s_at	3.498209172	3.690495702	2.656490513
TRAF5	204352_at	2.133773379	2.617458437	3.388844938
RIMS3	204730_at	2.373870908	1.916326573	1.746213449
IARS	204744_s_at	1.916241689	2.083162877	1.852676468
ATF5	204998_s_at	9.493873914	8.973255931	8.112907646
ASNS	205047_s_at	3.321250372	3.405544116	2.784236981
PSPH	205194_at	3.837081267	3.13085835	2.447122497
PPP1R1A	205478_at	2.608852438	2.81386795	2.854210336
ALAS1	205633_s_at	2.378578875	2.213623705	1.952347582
FABP3	205738_s_at	2.213603564	3.091602885	3.131682804
CLGN	205830_at	1.642580852	2.182036262	2.056803546
ASS1	207076_s_at	4.522155446	5.204565444	4.469892517
GARS	208693_s_at	2.375480056	2.450240552	2.173325568
TSC2D3	208763_s_at	2.817102262	3.167560203	2.701538022
H1FO	208886_at	2.323084332	2.227422167	2.199502298
STX3	209238_at	1.839855667	2.204640998	2.447879218
TNFRSF10B	209295_at	2.360923277	2.135245604	2.132038576
RGS16	209324_s_at	2.110954244	2.328496061	2.008733308
DDIT3 /// NR1H3	209383_at	3.18269705	3.805902665	3.378010017
GRB10	209409_at	2.263610569	1.748325445	1.492927338
DLK1	209560_s_at	2.176430594	1.671594299	1.481819531
PDLIM3	209621_s_at	1.674876803	2.048811288	2.117025471
SILV	209848_s_at	1.588377348	2.122763398	2.197475916
VEGFA	210512_s_at	4.59824937	4.905367026	5.863234792
NQO1	210519_s_at	3.117448304	4.1121357	2.916898173
GYG1	211275_s_at	1.875435741	2.070658375	1.673718371
SERPINB6	211474_s_at	1.779190727	2.303198342	2.091300522
LRIG1	211596_s_at	1.857158184	1.647927469	2.002575935
PTPRO	211600_at	2.109947753	2.408449294	2.256787461
NR3C1	211671_s_at	1.807734271	2.071932746	2.029755476
MTA1	211783_s_at	2.315331494	1.747545746	1.600097909
YARS	212048_s_at	2.330068327	2.078056303	1.83774207
SLC39A14	212110_at	2.110239456	1.984113278	1.762270202
XPOT	212160_at	2.212211054	2.30443419	1.887969833
SLC7A1	212290_at	2.193749813	1.863939414	1.770222439
SLC7A1	212295_s_at	3.047300232	3.30895921	2.062491631
C22orf9	212			



Cluster 1				
gene names	probe names	fold change		
		contr.vs.24h	contr.vs.36h	contr.vs.48h
HIST1H2AC	215071_s_at	0.756513434	0.678025393	0.358787358
DCLK1	215303_at	0.598982105	0.472436591	0.4128495
VCAN	215646_s_at	0.660183214	0.503680583	0.423990983
ATP2B1	215716_s_at	0.555739892	0.537464229	0.479223549
ZNF804A	215767_at	0.571494697	0.472355796	0.315357643
TCF7L2	216035_x_at	0.838092799	0.505389339	0.404973131
TCF7L2	216037_x_at	0.797890652	0.47725419	0.394015899
HNRNP1A1 /// HNR	216497_at	0.503132321	0.42912462	0.447399166
TCF7L2	216511_s_at	0.85924699	0.483633623	0.389846447
SYNCRIP	217834_s_at	0.8688189	0.856189212	0.492202456
KBTBD4 /// PTPMT	218570_at	0.693381254	0.659698732	0.471218927
LHFP	218656_s_at	0.875197326	0.631235406	0.454058107
NCAPG	218662_s_at	0.732772701	0.669850485	0.420371688
MLF1IP	218883_s_at	0.523495658	0.41836744	0.278734628
ZBTB10	219312_s_at	0.848297987	0.669424634	0.454060043
FXJ1	219522_at	0.806230664	0.603980779	0.452443495
1-Mar	219574_at	0.521774846	0.484077197	0.367923081
RP11-35N6.1	219732_at	0.730486165	0.562526886	0.320433589
PCDH9	219737_s_at	0.48001114	0.557430005	0.574673322
CDH10	220115_s_at	0.57055854	0.621602116	0.428971839
BNC2	220272_at	0.724579221	0.562245532	0.480012439
ARPP-21	220359_s_at	0.591441764	0.596176069	0.449758899
LBH	221011_s_at	0.734383466	0.638176495	0.48449978
FAM64A	221591_s_at	0.706576331	0.564674576	0.467348957
CSorf30	221823_at	0.696656295	0.599403724	0.46809268
GPR177	221958_s_at	0.62534712	0.441056374	0.348071852
MCM4	222036_s_at	0.685690884	0.532058789	0.401514353
---	222344_at	0.583125724	0.533339998	0.488996756
CLPTM1L	223020_at	0.790119526	0.6275596	0.480391746
ANKRD32	223542_at	0.644781351	0.555899759	0.448953684
TMEFF2	223557_s_at	0.798316232	0.496800113	0.303536527
MMP16	223614_at	0.474409598	0.461791704	0.378962684
DCBLD2	224911_s_at	0.775723596	0.592657748	0.408273158
FRMD4A	225163_at	0.752521039	0.535509921	0.470658868
EDIL3	225275_at	0.702675972	0.607634235	0.468487818
ETNK1	225290_at	0.45625338	0.465250635	0.437614169
FUSIP1	225348_at	0.559543052	0.605536601	0.370375812
PHF17	225816_at	0.771256199	0.587308006	0.415407265
PHF17	225820_at	0.713101027	0.586876921	0.412728443
DNER	226281_at	1.050913648	0.644581552	0.468580916
C3orf58	226464_at	0.711312891	0.56253225	0.400809344
PANK1	226649_at	0.803984804	0.646549333	0.414809739
C6orf173	226936_at	0.56328315	0.577263681	0.440491681
SGEF	227197_at	0.569475849	0.412209059	0.402372018
PCDH17	227289_at	0.692681181	0.468576821	0.335583399
---	228045_at	0.685465143	0.588511075	0.476934426
PRKG1	228396_at	0.751667048	0.684577481	0.498084605
PPP1R1C	228646_at	0.66552989	0.666969823	0.457000556
PCDH17	228863_at	0.693390145	0.463029798	0.325914486
GPR177	228950_s_at	0.651944239	0.481940098	0.344080845
---	229072_at	0.632778499	0.633855676	0.476132303
TMEM178	229302_at	0.571881733	0.437293504	0.40123013
---	229383_at	0.638526422	0.54579434	0.425435891
FBXW7	229419_at	0.625863628	0.593412466	0.466336896
LOC285178	230057_at	0.445835877	0.488810587	0.468352471
---	230175_s_at	0.83730906	0.606496268	0.413541485
TRIM13	230192_at	0.55659937	0.576161908	0.464234245
BNC2	230722_at	0.345517117	0.330193655	0.298657645
---	231037_at	0.606967146	0.481918561	0.466033645
UNC5D	231325_at	0.658362737	0.44403638	0.389778884
ASXL3	233536_at	0.735929986	0.583507692	0.489344283
---	235018_at	0.522066392	0.609196233	0.461894977
---	235201_at	0.451755561	0.52646229	0.469001637
---	235355_at	0.551035659	0.578668321	0.492838394
---	235456_at	0.938272635	0.656887591	0.424879392
---	235494_at	0.509512061	0.438355307	0.507397092
VSTM2A	236308_at	0.68483421	0.70314294	0.494569136
GRIA2	236538_at	0.405392825	0.35561862	0.428090255
ELAVL4	238073_at	0.705373173	0.541901356	0.360878672
---	238155_at	0.61918776	0.577062977	0.487582621
LOC100288418 ///	238199_x_at	0.379780278	0.337764919	0.343129145
BNC2	238478_at	0.379278993	0.324150492	0.320009482
MTHFD2L	238762_at	0.579871803	0.615820851	0.468636314
B3GAT2	239144_at	0.506094144	0.48628306	0.401095873
ZNF708	239482_x_at	0.529243134	0.592846893	0.435021134
POU3F2	242455_at	0.640262465	0.512835664	0.390435405
---	242845_at	0.60134294	0.477777351	0.407457588
---	243278_at	0.454170312	0.513144315	0.392477143
---	244295_at	0.450335753	0.558851433	0.597808022
DHFR	48808_at	0.709310539	0.58982976	0.45104406

Cluster 2				
gene names	probe names	fold change		
		contr.vs.24h	contr.vs.36h	contr.vs.48h
ATP6VOE1	214149_s_at	1.850895037	2.187835765	1.665453112
GAL	214240_at	2.101057092	2.193868826	2.113806957
DKK3	214247_s_at	2.449898753	2.323361123	2.062485984
SHMT2	214437_s_at	4.321115449	4.163757509	3.756232569
RHOQ	214449_s_at	2.358224817	1.927642631	1.585992478
BCAT1	214452_at	1.980323053	2.156769889	1.494981685
NHLH1	214628_at	3.39958852	3.016840914	2.867349552
SLC38A6	214830_at	1.44411401	2.244644354	2.066007235
FAM149A	214889_at	2.108367336	2.087841295	1.902734666
NR3C1	216321_s_at	2.391727169	2.624165362	2.255477156
MTCP1NB	216862_s_at	1.910169599	2.225562199	1.858040335
CTH	217127_at	2.759988979	2.926972774	2.071187567
HERPUD1	217168_s_at	2.920024792	3.299674443	3.083200371
S100A6	217728_at	1.766131835	2.292687861	2.559221639
GATAD2A	218131_s_at	2.105346891	1.68444975	1.460154446
CCDC92	218175_at	2.271859572	1.936257799	1.774475011
SCPEP1	218217_at	1.72655595	2.04297768	2.083431155
LARP6	218651_s_at	2.731116363	3.066978092	2.90233228
OBFC1	219100_at	1.74443222	2.098461072	1.898406388
CHAC1	219270_at	1.921467016	2.072980942	1.734139975
BCOR	219433_at	2.222876995	1.616864134	1.360178862
C1orf54	219506_at	1.447589094	1.927272297	2.033445154
OGFR1L	219582_at	2.328368949	2.634539375	1.954292783
ECEL1	219914_at	2.371197581	2.045993958	2.057977248
HRASLS	219983_at	2.216438336	2.471781511	2.233546016
SLC38A4	220786_s_at	1.869749036	2.362461295	1.967439986
PSAT1	220892_s_at	2.888670012	2.872973706	2.276993923
EIF4EBP1	221539_at	2.898328817	2.850483226	2.519013968
PSAT1	223062_s_at	3.346270936	3.237409471	2.652026949
SESN2	223195_s_at	2.237061323	2.105905786	1.833625184
SESN2	223196_s_at	3.046602084	2.335932857	2.035730632
RAB3IP	223471_at	1.945268151	2.273736416	1.911709862
C14orf4	223474_at	2.181498196	1.832805581	1.669321929
TTYH2	223741_s_at	1.872869212	1.908809976	2.253511044
CFC1 /// CFC1B	223753_s_at	2.397261017	3.175971502	3.281384763
IRF2BP2	224571_at	2.49031148	2.02437261	1.711394681
CSorf32	224707_at	1.676901115	2.011445697	1.903992286
LOC401397	224723_x_at	1.798288875	2.122617094	1.726188141
GASS	224741_x_at	1.966494828	2.169847755	1.951442283
GASS	224841_x_at	2.071633415	2.217778787	1.963583425
C20orf199	224915_x_at	2.001820774	2.227094835	1.750136937
CHCHD10	224932_at	2.302235086	2.338973248	2.235791433
LRP11	225060_at	2.209707497	2.031463279	1.61137056
DRAM2	225230_at	1.785342419	2.171113489	1.93425145
AK3L1	225342_at	1.768476815	2.305769953	2.539158961
MTHFD1L	225520_at	2.392983537	2.145478645	1.685101472
CEBPG	225527_at	1.915405424	2.042207299	1.80019336
PTPMT1	225901_at	1.99101507	2.260027579	2.280148774
METRNL	225955_at	2.077107608	2.00899006	1.840962505
SYT13	226086_at	2.389075221	1.81808609	1.668422676
UHRF1BP1	226135_at	2.205245522	1.935789008	1.69672277
C20orf199	226227_x_at	1.96887936	2.177736587	1.728478827
FLJ25076	226612_at	2.047361542	1.54725398	1.129353402
---	226834_at	2.138916972	2.057912561	2.172824391
C20orf199	226835_s_at	2.112790383	2.387919038	1.901351576
GRPEL2	226881_at	1.972157087	2.130501265	1.966699396
C17orf58	226901_at	2.000543415	1.742723975	1.496466641
CYP2R1	227109_at	2.077363577	2.532347288	2.40366217
C22orf9	227144_at	2.392057547	1.978215834	1.806366736
SLC16A9	227506_at	2.064940557	2.148668784	1.663850346
CBX4	227558_at	2.503256508	2.368876797	2.300975034
GPX8	227628_at	1.934061022	2.134596093	1.511315457
NCRNA00086 /// NCRNA00087	227909_at	2.446173641	2.498420312	2.600383237
FAM85A	227917_at	1.638460798	1.947695235	2.033660647
S1PR3	228176_at	2.171068146	1.724585379	1.597742072
TET1	228906_at	2.514098069	2.273921765	1.964948176
RFLL	228980_at	2.038538442	1.636497594	1.534115404
SNHG7	229050_s_at	2.905098303	2.346885825	2.001973746
LOC220930	229090_at	1.954093541	2.035456156	1.904410592
C10orf104	229145_at	1.945842038	2.02835777	1.69360888
---	229190_at	1.947742611	2.229354236	1.595830336
FAM19A5	229459_at	2.232034205	1.866065784	1.713761246
C12orf76	229679_at	1.714178574	2.041771476	1.809061141
TCP10L	230394_at	2.156507444	2.885677021	2.89891343
IRX1	230472_at	2.241548392	2.004704402	1.858985293
ST6GALNAC5	230482_at	1.875196685	2.027472341	2.055532671
SHISA2	230493_at	1.991549782	2.1639135	1.883455204
ANKRD9	230972_at	2.249902512	2.509972216	2.651598767
GPR155	231166_at	1.921438313	2.40657684	3.232090115
LOC730125	232111_at	1.881501498	2.013188772	1.846540633
SLC6A15	232263_at	1.988255439	2.057940014	1.774081343
GATAD2A	234294_x_at	2.280696625	1.901999764	1.614655831
LOC148189	235191_at	2.313245299	2.64455	

Cluster 3					Cluster 4				
gene names	probe names	fold change			gene names	probe names	fold change		
		contr.vs.24h	contr.vs.36h	contr.vs.48h			contr.vs.24h	contr.vs.36h	contr.vs.48h
DKFZP434L187	1569476_at	0.736820733	1.166901626	2.176373699	RASEF	1553185_at	0.423999843	0.548142302	1.011904703
S100A4	203186_s_at	1.298052254	1.661452282	2.155183283	RASEF	1553186_x_at	0.405269228	0.542673471	1.016570735
UNC84A	206487_at	0.975662344	1.184301239	2.180490334	---	1558714_at	0.406837819	0.594195601	1.055695896
MEG3	210794_s_at	1.149700025	1.306460149	2.04470871	MAP4K4	1558732_at	0.448458461	0.540353381	0.94089539
MEG3	212732_at	0.89844632	1.162440879	2.167099919	LOC728052	1558795_at	0.495722723	0.620028834	0.783404841
HNRNP	213359_at	1.233204336	1.654390432	2.309535235	---	1564378_a_at	0.428812977	0.528390058	0.766350849
N4BP2L2	214753_at	1.079403451	1.559348887	2.531878915	---	1564776_at	0.464153468	0.653934537	0.823672231
GTF2H2B	215470_at	0.928370448	1.448214448	2.404033703	DDX17	213998_s_at	0.2907431	0.394745159	0.601719644
GSDMB	219233_s_at	1.45212443	1.724283984	2.734667576	ATP8B1	214594_x_at	0.434771601	0.501492916	0.745397071
LOC100131564	227074_at	1.009755372	1.353554214	2.181206288	---	215448_at	0.277560804	0.381293469	0.56891148
---	228465_at	1.15943543	1.539135383	2.109927128	---	216110_x_at	0.422074063	0.512908848	0.790485663
ZNF449	228968_at	1.015274222	1.57235764	2.143902663	---	216518_at	0.466660458	0.854331812	1.429606717
GART	230097_at	1.073549504	1.656981429	2.755161738	---	217617_at	0.427406218	0.579412947	0.901621503
NBPF1 /// NBPF3 /// NBPF8	230712_at	1.090681264	1.393062453	2.236053246	---	224254_x_at	0.498036239	0.68525707	1.311077636
DKFZP434L187	230861_at	1.428308591	2.012185549	3.055040479	---	224549_x_at	0.478158664	0.633460961	1.097980555
---	232628_at	0.665480607	1.214257554	2.190643836	ANKRD10	226663_at	0.495556974	0.699198482	0.980278881
---	234101_at	0.85628983	1.301023631	2.265463411	---	230180_at	0.253414341	0.381267653	0.593102121
KCNT2	234103_at	1.049563391	1.550396894	2.127286142	NDUFS8	232169_x_at	0.489609647	0.586550554	1.054317658
MEG3	235077_at	0.795358944	1.035666389	2.041636039	---	232286_at	0.48544998	0.626745859	0.907599061
---	235926_at	1.019812983	1.283698683	2.219794104	---	232726_at	0.463788948	0.681687033	1.150843371
XPO1	235927_at	1.222025822	1.607175192	2.053648148	EBF1	233261_at	0.457859289	0.643937447	1.036868765
---	236417_at	1.024889109	1.489138304	2.322317278	---	233401_at	0.482368548	0.619779527	0.969094356
FDFT1	241954_at	0.788368913	1.109658756	2.115837702	---	234074_at	0.473664941	0.636728455	0.824830827
---	243020_at	0.839995531	1.327893228	2.053357486	---	235693_at	0.499061303	0.78446783	1.282814758
---	243514_at	0.85203251	1.239802415	2.400614499	---	235716_at	0.450841843	0.609352393	0.923715072
---	244075_at	0.949800147	1.389789029	2.316454681	---	237007_at	0.40281685	0.557730659	0.871251275
					---	239393_at	0.450054806	0.620050034	0.92926722
					---	240758_at	0.484299638	0.649804235	1.435884747
					---	242052_at	0.49005571	0.707333028	1.479732532
					---	242558_at	0.400208801	0.608971249	1.110692398
					---	243756_at	0.454604283	0.643320107	1.029361778
					---	243819_at	0.468470142	0.678881602	1.040923962
					---	244420_at	0.478275534	0.72638577	1.065696055
					---	244625_at	0.445207019	0.681604874	1.229391883

24 h			36 h			48 h		
Gene names	log2 fold change	fold change	Gene names	log2 fold change	fold change	Gene names	log2 fold change	fold change
<b>Down-regulated genes (fold change cutoff &lt; 0.5)</b>			<b>Down-regulated genes (fold change cutoff &lt; 0.5)</b>			<b>Down-regulated genes (fold change cutoff &lt; 0.5)</b>		
RPS12P26	-4.76865	0.03669	MT-ND6	-3.83336	0.07015	MT-ND6	-3.75665	0.07398
MT-ND6	-3.47861	0.08971	LYPD1	-3.54149	0.08588	TRPC4	-3.74635	0.07451
MT-CO2	-3.12227	0.11484	MT-CO2	-3.47024	0.09023	SCUBE3	-3.72522	0.07561
HES3	-3.05609	0.12023	MT-CO3	-3.43386	0.09253	MT-CO3	-3.58686	0.08322
MT-ND3	-2.64026	0.16040	KCND2	-3.35707	0.09759	EOMES	-3.56318	0.08460
MT-CYB	-2.52915	0.17324	MT-ND3	-3.29946	0.10157	MT-ND3	-3.55498	0.08508
TXNIP	-2.49957	0.17683	MT-CYB	-3.13708	0.11367	MT-CO2	-3.53416	0.08632
ATP5A1P5	-2.16728	0.22263	SCUBE3	-2.83197	0.14044	RRM2	-3.53145	0.08648
TRPC4	-2.12088	0.22991	RRM2	-2.78777	0.14481	LYPD1	-3.43524	0.09245
LRRN4CL	-2.10349	0.23269	TRIM58	-2.76554	0.14706	MT-CYB	-3.41703	0.09362
BARHL2	-2.01766	0.24696	SCML4	-2.70891	0.15295	BARHL2	-2.97816	0.12691
DNAJC22	-2.00643	0.24889	DNAJC22	-2.65743	0.15850	LMO3	-2.97217	0.12743
COX6B1P1	-1.96074	0.25690	BARHL2	-2.65188	0.15911	PLXNA4	-2.95516	0.12895
EOMES	-1.91382	0.26539	EOMES	-2.64522	0.15985	DNAJC22	-2.90121	0.13386
GAPDHP44	-1.90653	0.26673	SYNPR	-2.46014	0.18173	TDRG1	-2.87953	0.13589
SCUBE3	-1.90531	0.26696	MT-ND5	-2.40909	0.18827	CDC6	-2.82098	0.14151
PENK	-1.89239	0.26936	PENK	-2.38892	0.19093	SPOCK3	-2.75172	0.14847
TRIM58	-1.86488	0.27455	CDH18	-2.37603	0.19264	HIST1H3E	-2.73429	0.15028
ACTG1P9	-1.85147	0.27711	FAM181B	-2.36908	0.19357	ASF1B	-2.72413	0.15134
LRRN3	-1.81054	0.28508	TDRG1	-2.36465	0.19416	NCAM2	-2.72057	0.15171
RRM2	-1.77049	0.29311	TXNIP	-2.31407	0.20109	MCM10	-2.71633	0.15216
RN7SL1	-1.76685	0.29385	PLXNA2	-2.31383	0.20113	NGB	-2.69489	0.15444
PCDH11X	-1.69179	0.30954	LMO3	-2.30889	0.20182	CDH18	-2.67041	0.15708
HIST1H2BG	-1.62535	0.32413	LRRN4CL	-2.29008	0.20446	SEMA3D	-2.64762	0.15958
SCML4	-1.62137	0.32503	PLXNA4	-2.25042	0.21016	LRRN4CL	-2.64708	0.15964
EPHA7	-1.58741	0.33277	GAPDHP72	-2.23725	0.21209	GTSE1	-2.64218	0.16019
ISM1	-1.58684	0.33290	GALR1	-2.21394	0.21554	DLGAP5	-2.63687	0.16078
GALR1	-1.58316	0.33375	NGB	-2.17974	0.22072	NXP2	-2.62457	0.16215
RNA5-8SP3	-1.55697	0.33986	MT-ATP6	-2.17073	0.22210	TRIM58	-2.60536	0.16433
MT-ATP6	-1.53743	0.34450	MT-ND2	-2.16575	0.22287	MT-ND5	-2.59187	0.16587
MMP16	-1.53579	0.34489	SPOCK3	-2.11634	0.23063	KIF18B	-2.57505	0.16782
LMO3	-1.51359	0.35024	CDC6	-2.11276	0.23120	ASPM	-2.57062	0.16833
CALM2P3	-1.50916	0.35132	SEMA3D	-2.08514	0.23567	CTGF	-2.51792	0.17459
SEMA3D	-1.50428	0.35251	BRIP1	-2.07647	0.23709	E2F7	-2.51065	0.17548
MT-ND2	-1.46554	0.36210	MT-ND1	-2.07647	0.23709	TXNIP	-2.50427	0.17625
MT-ND1	-1.46061	0.36334	ORC1	-2.00475	0.24918	BRIP1	-2.49738	0.17710
ARRDC4	-1.45874	0.36381	PCDH11X	-1.95011	0.25880	ORC1	-2.49008	0.17800
HIST2H2BE	-1.43714	0.36930	DLGAP5	-1.94422	0.25986	GALR1	-2.47187	0.18026
BRIP1	-1.40605	0.37734	CTGF	-1.92178	0.26393	HIST1H2BG	-2.45961	0.18180
HSP90B2P	-1.39983	0.37897	LRRN3	-1.91123	0.26587	PENK	-2.44262	0.18395
FOXJ1	-1.39052	0.38143	CNTN5	-1.90448	0.26711	MT-ATP6	-2.42299	0.18647
BMP5	-1.38851	0.38196	HIST1H2BG	-1.89627	0.26864	CTXN3	-2.41831	0.18708
ORC1	-1.38036	0.38412	ISM1	-1.88916	0.26996	MT-ND2	-2.40714	0.18853
LY6G5C	-1.37972	0.38429	FAT4	-1.86481	0.27456	MT-ND1	-2.38722	0.19115
HSP90B3P	-1.37784	0.38479	AURKB	-1.86421	0.27467	AURKB	-2.37183	0.19320



24 h			36 h			48 h		
Gene names	log2 fold change	fold change	Gene names	log2 fold change	fold change	Gene names	log2 fold change	fold change
CDR1	-1.37669	0.38510	CDK1	-1.86266	0.27497	SYNPR	-2.37179	0.19321
POU3F2	-1.37496	0.38556	DSCC1	-1.85889	0.27569	UBE2C	-2.36826	0.19368
TDRG1	-1.35862	0.38996	FAM64A	-1.83688	0.27993	BIRC5	-2.36415	0.19423
ASF1B	-1.34759	0.39295	MT-ND4	-1.82023	0.28318	FAM181B	-2.34469	0.19687
PTCHD4	-1.34528	0.39358	EPHA7	-1.80308	0.28656	CNTN5	-2.33184	0.19863
FAM181B	-1.34002	0.39502	TYMS	-1.79402	0.28837	E2F2	-2.32465	0.19962
RANP6	-1.33539	0.39628	HIST1H3E	-1.78618	0.28994	DIAPH3	-2.31695	0.20069
STC1	-1.33461	0.39650	KIF4A	-1.78321	0.29054	ANKDD1B	-2.29729	0.20344
CNTN5	-1.32748	0.39846	FOXJ1	-1.77423	0.29235	GCNT4	-2.29168	0.20424
FAT4	-1.32297	0.39971	DRGX	-1.77322	0.29256	BUB1	-2.29056	0.20440
RNA5-8SP2	-1.31293	0.40250	NUSAP1	-1.77051	0.29311	NDC80	-2.28816	0.20474
B3GAT2	-1.30374	0.40507	ZWINT	-1.75329	0.29662	PCDH11X	-2.27866	0.20609
HIST1H3E	-1.29817	0.40664	BIRC5	-1.74288	0.29877	FAM64A	-2.27843	0.20612
LHX9	-1.27017	0.41461	ASPM	-1.74028	0.29931	TOP2A	-2.24052	0.21161
PCDH20	-1.26622	0.41575	NEIL3	-1.73929	0.29952	DBC1	-2.22956	0.21322
MEOX2	-1.23728	0.42417	ID1	-1.72742	0.30199	KCNK10	-2.21652	0.21516
E2F2	-1.22729	0.42712	BMP2	-1.70653	0.30640	ZWINT	-2.20475	0.21692
RNA18S5	-1.21439	0.43096	CTXN3	-1.70417	0.30690	CHRN4	-2.20448	0.21696
DSCC1	-1.19348	0.43725	SYT6	-1.66013	0.31641	EPHA7	-2.17945	0.22076
FAM171B	-1.15431	0.44928	TRH	-1.65545	0.31744	KIF14	-2.17546	0.22137
HSP90B1	-1.14887	0.45098	KIF18B	-1.65404	0.31775	CCNA2	-2.16528	0.22294
DNAJC3	-1.14799	0.45125	HIST2H2BE	-1.65104	0.31841	MT-ND4	-2.16231	0.22340
ANKRD30BL	-1.14445	0.45236	GCNT4	-1.64838	0.31900	CDCA8	-2.15747	0.22415
KCTD12	-1.14428	0.45242	CDCA8	-1.59119	0.33190	KIFC1	-2.15444	0.22462
RPL3P2	-1.13541	0.45521	NGFR	-1.59112	0.33191	DSCC1	-2.14383	0.22628
ARHGEF26	-1.13452	0.45549	NDC80	-1.58554	0.33320	NEIL3	-2.13487	0.22769
BZW1P1	-1.13404	0.45564	CUX2	-1.55784	0.33966	BMP2	-2.12277	0.22961
ZBED6	-1.13373	0.45574	KIF14	-1.55279	0.34085	KIF15	-2.09617	0.23388
EPHA3	-1.12427	0.45873	TOP2A	-1.55141	0.34118	XRCC2	-2.07531	0.23728
ZNF804A	-1.12334	0.45903	MLF1IP	-1.53689	0.34463	RMI2	-2.05507	0.24064
ZNF708	-1.12147	0.45963	MYBL2	-1.53307	0.34554	CCNB2	-2.03477	0.24405
CALM2P4	-1.11924	0.46034	CENPF	-1.52318	0.34792	FAM83D	-2.02486	0.24573
MT-ND4	-1.11554	0.46152	BUB1	-1.51931	0.34885	MIR17HG	-2.02174	0.24626
PIM2	-1.11528	0.46160	XRCC2	-1.50627	0.35202	MYBL2	-2.02094	0.24640
DBC1	-1.11195	0.46267	DBC1	-1.50379	0.35263	TRH	-2.00132	0.24977
SCN3A	-1.11106	0.46295	CHRN4	-1.48643	0.35689	HIST2H2BE	-1.99902	0.25017
GCNT4	-1.10848	0.46378	ISL1	-1.48623	0.35694	ISM1	-1.99884	0.25020
TTK	-1.10564	0.46470	MEOX2	-1.47292	0.36025	SYT6	-1.97463	0.25444
ETNK1	-1.10404	0.46521	CCNB1	-1.46447	0.36237	FOXJ1	-1.95535	0.25786
PCDH9	-1.10048	0.46636	ACTN3	-1.45177	0.36557	NGFR	-1.92895	0.26262
SFMBT2	-1.09539	0.46801	STC1	-1.42549	0.37229	TYMS	-1.91995	0.26426
LNPEP	-1.08639	0.47094	UBE2C	-1.41582	0.37480	FAT4	-1.91801	0.26462
DSEL	-1.07963	0.47315	MAD2L1	-1.41398	0.37527	NR5A2	-1.91124	0.26586
CSRNP3	-1.07366	0.47511	MIR17HG	-1.40648	0.37723	ACTN3	-1.89639	0.26861
CUX2	-1.07339	0.47520	POU3F2	-1.40314	0.37811	SFMBT2	-1.89192	0.26945
EDIL3	-1.06873	0.47674	ARHGEF26	-1.39793	0.37947	PRR11	-1.88464	0.27081

24 h			36 h			48 h		
Gene names	log2 fold change	fold change	Gene names	log2 fold change	fold change	Gene names	log2 fold change	fold change
KLHL4	-1.06244	0.47882	NR5A2	-1.37171	0.38643	CEP55	-1.85187	0.27703
TMTC1	-1.06082	0.47936	EPHA3	-1.36281	0.38882	CUX2	-1.85038	0.27732
NRGN	-1.05998	0.47964	WDR62	-1.35916	0.38981	STC1	-1.82904	0.28145
SLITRK1	-1.05977	0.47971	C17orf53	-1.35198	0.39175	EPHA3	-1.80964	0.28526
NGFR	-1.05676	0.48071	AMH	-1.35068	0.39211	GPR83	-1.80818	0.28555
ST8SIA4	-1.04999	0.48297	GRIA2	-1.34579	0.39344	TMEFF2	-1.80274	0.28663
DRGX	-1.04859	0.48344	NEGR1	-1.33496	0.39640	MGAT4C	-1.79388	0.28840
TRH	-1.03547	0.48786	HS3ST3B1	-1.32514	0.39911	WDR62	-1.78985	0.28920
ZWINT	-1.03403	0.48834	CCNB2	-1.32334	0.39961	LRP1B	-1.77737	0.29171
C5orf55	-1.02647	0.49091	B3GAT2	-1.28853	0.40937	NCAPH	-1.76305	0.29462
FIGN	-1.00529	0.49817	SORBS1	-1.27863	0.41219	ATAD2	-1.75482	0.29631
<b>Up-regulated genes (fold change cutoff &gt; 2)</b>			C1QL4	-1.27863	0.41219	HIST1H4H	-1.74888	0.29753
IRAK1	1.00015	2.00021	CRABP1	-1.27545	0.41310	AMOTL2	-1.72307	0.30290
TPPP3	1.00102	2.00141	UNC5D	-1.23336	0.42533	NELL2	-1.70343	0.30706
SRXN1	1.00563	2.00782	KIF11	-1.23003	0.42631	AMH	-1.68207	0.31164
KLHDC8A	1.00903	2.01256	CDH10	-1.21693	0.43020	MEOX2	-1.67433	0.31331
RBFOX3	1.01286	2.01791	ZNF804A	-1.21499	0.43078	SORBS1	-1.65779	0.31692
RFNG	1.01527	2.02128	SST	-1.21057	0.43210	HIST1H2AC	-1.63059	0.32296
STARD10	1.01555	2.02167	HMGA2	-1.20721	0.43311	MMP16	-1.61882	0.32560
STAC2	1.01642	2.02289	GPR83	-1.20014	0.43523	C1QL4	-1.60714	0.32825
NID1	1.01662	2.02317	WLS	-1.19974	0.43535	ISL1	-1.60645	0.32841
TMEM161A	1.01724	2.02404	PCDH17	-1.17274	0.44358	CRABP1	-1.59835	0.33025
KLF16	1.02705	2.03785	LNPEP	-1.17077	0.44418	PCDH17	-1.59179	0.33176
DUSP14	1.02777	2.03887	RBM3	-1.14854	0.45108	KIF11	-1.58294	0.33380
KREMEN1	1.03151	2.04416	VN1R48P	-1.14135	0.45334	ARHGEF26	-1.57721	0.33513
DOCK6	1.03586	2.05034	HSP90B2P	-1.13626	0.45494	UNC5D	-1.57207	0.33633
PPAPDC3	1.03626	2.05090	CHAF1A	-1.12859	0.45736	VN1R48P	-1.56101	0.33891
SARS	1.03716	2.05218	PCDH9	-1.12245	0.45931	LEF1	-1.55402	0.34056
FTH1	1.04059	2.05707	CHRD1	-1.11315	0.46228	HNRNPM	-1.55161	0.34113
RAMP2	1.04134	2.05814	FXD7	-1.09763	0.46728	HMGA2	-1.51076	0.35093
CLDN5	1.04558	2.06420	HSP90B3P	-1.09242	0.46897	SST	-1.49786	0.35408
BDKRB2	1.05033	2.07100	PCDHB4	-1.08661	0.47087	FXD7	-1.46207	0.36297
PKN1	1.05689	2.08044	NELL2	-1.08217	0.47232	MRM1	-1.44639	0.36694
CARS	1.05752	2.08135	ARRDC4	-1.07053	0.47614	C17orf53	-1.42627	0.37209
SERPINB6	1.05994	2.08484	H2AFX	-1.06682	0.47737	TPX2	-1.42005	0.37370
SHANK3	1.06304	2.08933	SGOL2	-1.06493	0.47800	B3GAT2	-1.40995	0.37632
SIT1	1.06581	2.09334	LMNB1	-1.05934	0.47985	WLS	-1.40822	0.37678
CD55	1.06628	2.09403	ISL2	-1.05665	0.48075	FJX1	-1.40291	0.37817
ICAM5	1.06653	2.09439	KLHL4	-1.05261	0.48210	NCOA5	-1.39557	0.38009
SYT7	1.06665	2.09456	ELAVL4	-1.05116	0.48258	POU3F2	-1.38343	0.38331
C1orf233	1.06674	2.09469	FJX1	-1.03795	0.48702	RNF152	-1.36857	0.38727
IFITM1	1.06875	2.09762	PRR11	-1.03636	0.48756	HIST1H2AG	-1.36325	0.38871
FAM149A	1.07432	2.10573	LIG1	-1.03333	0.48858	CDH10	-1.35448	0.39108
EMP3	1.07709	2.10978	BAI3	-1.02697	0.49074	SFPQP1	-1.34614	0.39334
AEBP1	1.08774	2.12541	HSP90B1	-1.02536	0.49129	PCDH9	-1.33076	0.39756
FABP3	1.08786	2.12559	TPX2	-1.01894	0.49348	LMNB1	-1.32363	0.39953



24 h			36 h			48 h		
Gene names	log2 fold change	fold change	Gene names	log2 fold change	fold change	Gene names	log2 fold change	fold change
CHST1	1.09695	2.13902	RFC3	-1.01295	0.49553	H2AFX	-1.32177	0.40004
PPDPF	1.09722	2.13942	<b>Up-regulated genes (fold change cutoff &gt; 2)</b>			MAD2L1	-1.31939	0.40070
ATP2A3	1.09771	2.14015	SIX2	1.00231	2.00320	PTN	-1.30413	0.40497
RHPN1	1.09876	2.14171	C1orf115	1.00315	2.00437	KIF20B	-1.30331	0.40520
DKK3	1.10735	2.15450	LINC00617	1.00679	2.00944	ING3	-1.30161	0.40567
HK2	1.11089	2.15979	ARL4C	1.00918	2.01277	DEPDC1B	-1.27727	0.41258
MPST	1.11112	2.16013	BCAT2	1.01134	2.01578	FBXO5	-1.27589	0.41297
ATF4P4	1.11223	2.16180	CCDC8	1.01501	2.02092	VSTM2B	-1.27442	0.41339
SIX2	1.11659	2.16834	DUSP14	1.01504	2.02096	BNC2	-1.26974	0.41473
RHBDF2	1.11687	2.16876	FGF11	1.01621	2.02260	LARGE	-1.24507	0.42189
XBP1	1.12024	2.17383	TRPM4	1.01684	2.02348	SLC24A3	-1.24042	0.42325
TRPM4	1.12329	2.17843	CHST1	1.02105	2.02940	B3GALT2	-1.22468	0.42789
CHPT1	1.12388	2.17932	SHISA2	1.02385	2.03334	BMP5	-1.22305	0.42838
N4BP3	1.12537	2.18157	HRC	1.02388	2.03338	BAI3	-1.22115	0.42894
FAM222A	1.13042	2.18922	TH	1.02454	2.03431	HIST1H2BK	-1.22032	0.42919
BOK	1.13268	2.19266	MLST8	1.02821	2.03949	GNAT3	-1.21654	0.43031
ROBO3	1.13389	2.19450	ENDOD1	1.02947	2.04127	SALL3	-1.18658	0.43934
WARS	1.13634	2.19823	RASL10B	1.03126	2.04381	ZNF85	-1.18373	0.44021
TNFRSF1A	1.13836	2.20131	ZNFX1-AS1	1.03459	2.04853	DNER	-1.17018	0.44437
RPH3AL	1.14113	2.20554	ITGA4	1.03652	2.05127	HS3ST2	-1.15504	0.44905
DLG4	1.14269	2.20792	IRX1	1.03804	2.05344	RNF125	-1.14717	0.45151
TNFRSF10B	1.14547	2.21218	GPRC5C	1.03912	2.05497	NTN1	-1.14648	0.45173
SLC1A4	1.14571	2.21255	CMTM4	1.04178	2.05877	SLITRK1	-1.14548	0.45204
MMP17	1.14715	2.21476	ALAS1	1.04682	2.06597	SEMA3E	-1.14408	0.45248
CTSL1	1.14778	2.21573	HAX1	1.04869	2.06865	ZNF708	-1.14149	0.45329
MTSS1L	1.14894	2.21751	HCN2	1.05233	2.07388	TTC9	-1.12426	0.45874
YARS	1.14934	2.21812	PPDPF	1.05658	2.07999	FZD1	-1.12194	0.45948
OGFRL1	1.14947	2.21832	PPARGC1B	1.05832	2.08251	LIG1	-1.10467	0.46501
HES4	1.15085	2.22045	PADI2	1.05943	2.08411	C5orf30	-1.09541	0.46800
ISG15	1.15199	2.22220	TNFAIP8L1	1.06585	2.09340	LSM11	-1.09511	0.46810
GRIN2D	1.15281	2.22347	TAGLN2	1.07272	2.10340	PCDHB4	-1.09427	0.46837
EXOC3L1	1.15318	2.22404	SARS	1.07298	2.10377	CHAF1A	-1.08677	0.47081
IRX1	1.15361	2.22470	C21orf77	1.08077	2.11516	SLITRK5	-1.08364	0.47184
SH3BP4	1.15577	2.22803	CCDC155	1.08082	2.11524	SRSF3	-1.06437	0.47818
GAL	1.15624	2.22876	PTPRM	1.08259	2.11783	NR2F1	-1.06366	0.47842
WSCD1	1.15745	2.23063	GRPEL2	1.08845	2.12645	ZNF180	-1.06304	0.47862
TRIM72	1.15776	2.23111	PYCR1	1.08893	2.12716	TRA2A	-1.04464	0.48477
SIX3	1.16039	2.23518	CARS	1.09187	2.13150	GBE1	-1.04135	0.48587
C18orf1	1.16293	2.23912	GADD45G	1.09254	2.13249	NKAIN2	-1.03835	0.48688
CHST8	1.16312	2.23941	IRAK1	1.09551	2.13689	SMG9	-1.03353	0.48851
GFPT2	1.16634	2.24442	CEBPG	1.09733	2.13958	MOB3B	-1.02982	0.48977
KIAA1644	1.17056	2.25099	SGPP2	1.10056	2.14438	C10orf114	-1.02297	0.49210
XPOT	1.17152	2.25249	KLHDC8A	1.10065	2.14451	CLSTN2	-1.01573	0.49458
RNF112	1.17489	2.25776	KIAA1644	1.10218	2.14679	HSP90B1	-1.01223	0.49578
SOX8	1.17491	2.25779	ZNF600	1.10313	2.14820	EPC2	-1.01034	0.49643
ARHGAP23	1.17709	2.26120	UBTD1	1.10569	2.15202	HSP90B2P	-1.00721	0.49751

24 h			36 h			48 h		
Gene names	log2 fold change	fold change	Gene names	log2 fold change	fold change	Gene names	log2 fold change	fold change
C5orf65	1.17998	2.26574	SRL	1.10628	2.15290	TP53	-1.00528	0.49817
PHYHIP	1.18608	2.27534	GTPBP2	1.10773	2.15506	MAGI2	-1.00095	0.49967
KLF9	1.18901	2.27996	ARL4D	1.11154	2.16076	<b>Up-regulated genes (fold change cutoff &gt; 2)</b>		
GARS	1.18914	2.28017	SNHG7	1.11287	2.16275	IGSF8	1.00071	2.00098
COL18A1	1.19004	2.28159	GM2A	1.11895	2.17189	SIX2	1.00368	2.00511
RPL23P8	1.19039	2.28214	C1orf233	1.11906	2.17205	TRPM4	1.00401	2.00557
FLNC	1.19185	2.28445	SYT3	1.12745	2.18472	PRKD2	1.00765	2.01063
KIAA1161	1.19908	2.29593	N4BP3	1.13084	2.18986	RFPL4B	1.01214	2.01690
GAS2L1	1.19945	2.29652	C5orf65	1.13099	2.19009	LOXL1	1.01469	2.02047
TMEM240	1.20429	2.30424	MFAP2	1.13238	2.19220	S1PR3	1.01582	2.02205
EPPK1	1.20432	2.30429	SOX8	1.13465	2.19565	IRX1	1.01697	2.02366
SYNGR2	1.20482	2.30509	PHYHIP	1.14131	2.20581	HLA-A	1.01714	2.02390
NCR3LG1	1.20731	2.30907	BCAM	1.14784	2.21582	OLFM1	1.01721	2.02400
DOC2B	1.20754	2.30944	TSPAN15	1.14917	2.21786	BCAT2	1.02022	2.02823
RRAS	1.20814	2.31040	RAMP2	1.15058	2.22003	SNAI2	1.02359	2.03297
VGF	1.20847	2.31092	GRIN2D	1.15148	2.22142	YARS	1.02586	2.03617
FMNL1	1.20922	2.31213	SYT2	1.15407	2.22541	MFNG	1.02784	2.03897
CACNG5	1.21475	2.32101	SH3RF3	1.15526	2.22724	PGPEP1	1.03023	2.04235
ZNF204P	1.21762	2.32563	HSPB1	1.15545	2.22754	XBP1	1.03113	2.04362
IGHM	1.22642	2.33986	AIF1L	1.16164	2.23712	KRT33B	1.03205	2.04493
HSPB1	1.22849	2.34322	DKK3	1.16315	2.23946	GLB1L2	1.03861	2.05425
GADD45G	1.24439	2.36918	PMEL	1.16984	2.24987	KCNIP1	1.04246	2.05974
FAM211B	1.24744	2.37420	EPPK1	1.17221	2.25357	DSG2	1.04346	2.06117
PTPRN	1.25283	2.38308	SNTA1	1.17226	2.25364	SRXN1	1.04476	2.06302
IMPA2	1.25931	2.39381	XBP1	1.17591	2.25935	RBFOX3	1.04544	2.06400
PLP2	1.26143	2.39733	YARS	1.17868	2.26370	PPDPF	1.04908	2.06921
ATP4A	1.27991	2.42824	SOWAHA	1.18052	2.26658	SLC6A16	1.04951	2.06983
EML2	1.28125	2.43049	SYT7	1.18395	2.27198	ZNF449	1.05168	2.07294
AARS	1.28822	2.44227	GLT25D2	1.18622	2.27556	RARA	1.05235	2.07391
FAIM2	1.29059	2.44628	FAM149A	1.18702	2.27682	GIPC3	1.06257	2.08865
HSD17B14	1.29777	2.45849	DOC2B	1.18906	2.28004	ZNF702P	1.06267	2.08879
H1FO	1.29843	2.45961	BAIAP2-AS1	1.19273	2.28585	HRC	1.06356	2.09008
KCNH6	1.30443	2.46986	FAM46C	1.19807	2.29433	GPRC5C	1.06825	2.09689
RILPL1	1.30472	2.47036	KIAA1161	1.20194	2.30049	TBC1D16	1.07115	2.10111
SPINT2	1.30651	2.47342	TNFAIP2	1.20451	2.30459	EPOR	1.07274	2.10342
CECR1	1.30657	2.47353	RPS27	1.20728	2.30902	CCDC8	1.08812	2.12597
CLDN6	1.30974	2.47897	DUSP5	1.20799	2.31016	PHLDB3	1.08915	2.12749
PYCR1	1.31318	2.48489	EXOC3L1	1.21257	2.31750	TNFRSF10D	1.08934	2.12777
CAMKK1	1.31444	2.48706	CTSL1	1.21952	2.32869	TH	1.09008	2.12886
PLEKHA4	1.32414	2.50384	FAM78A	1.22333	2.33485	KLF16	1.09094	2.13013
GAS5	1.32672	2.50832	XPOT	1.22682	2.34051	RAB11FIP1	1.09111	2.13038
CHCHD10	1.32706	2.50891	TTYH2	1.23008	2.34580	SYT3	1.09282	2.13291
CBX4	1.32832	2.51110	KCNT1	1.23072	2.34684	ARL4C	1.09846	2.14126
P2RX2	1.32907	2.51241	OGFRL1	1.23426	2.35261	MGMT	1.10303	2.14805
PANX2	1.35109	2.55105	CDS1	1.23438	2.35280	QSOX2	1.10669	2.15351
TH	1.35339	2.55512	S100A6	1.23555	2.35471	CRB2	1.11135	2.16048



24 h			36 h			48 h		
Gene names	log2 fold change	fold change	Gene names	log2 fold change	fold change	Gene names	log2 fold change	fold change
PKD1	1.35763	2.56264	TNFRSF10B	1.23747	2.35785	HK2	1.11733	2.16945
GNG7	1.36057	2.56787	PANX2	1.23884	2.36009	GIPR	1.11846	2.17115
SLC7A1	1.36692	2.57919	PPAPDC3	1.23992	2.36185	GPR3	1.12054	2.17428
LLGL2	1.37573	2.59499	PDLIM3	1.25324	2.38376	KIAA1644	1.12177	2.17614
MAL	1.37921	2.60126	SH3BP4	1.25666	2.38942	APLNR	1.12297	2.17795
RFPL4B	1.38178	2.60590	RYP1	1.25695	2.38990	PPL	1.12592	2.18241
METRNL	1.39619	2.63206	FMNL1	1.25801	2.39166	RBPMS2	1.12873	2.18666
PPP1R1A	1.40393	2.64621	GAS6	1.25827	2.39209	GADD45G	1.12994	2.18850
SLC32A1	1.40665	2.65121	EML2	1.25845	2.39239	PCYT2	1.13115	2.19033
LOXL4	1.40801	2.65371	MYL1	1.25927	2.39375	HLA-E	1.13152	2.19089
SLC29A1	1.40817	2.65400	COL18A1	1.26016	2.39522	GAS5	1.13317	2.19340
PCBD1	1.42349	2.68234	HEBP1	1.26163	2.39766	MYL1	1.13396	2.19460
FOXO6	1.42602	2.68704	GAS5	1.27595	2.42158	KCNK6	1.13415	2.19489
TRAF5	1.42761	2.69001	SHD	1.27635	2.42225	AR	1.13592	2.19759
TMEM190	1.43261	2.69935	SERPINB6	1.27966	2.42782	HES7	1.15534	2.22737
TMEM176A	1.43598	2.70566	ME1	1.28676	2.43980	DOCK6	1.15559	2.22775
FAM163B	1.44457	2.72182	SLC1A4	1.28796	2.44183	C1orf115	1.15578	2.22805
CD248	1.44834	2.72894	CLEC4G	1.28967	2.44472	OGFRL1	1.15912	2.23321
CPT1A	1.45571	2.74292	AHNAK2	1.29097	2.44693	PLIN3	1.16331	2.23971
ISLR	1.46097	2.75293	SLC7A1	1.29263	2.44974	ME1	1.17904	2.26426
IQCA1	1.46417	2.75905	RILPL1	1.29534	2.45435	GTPBP2	1.18037	2.26635
RD3	1.47092	2.77199	DUSP5P	1.30195	2.46562	B3GNT2	1.18094	2.26724
ATHL1	1.48176	2.79289	H1FO	1.31722	2.49185	GALK1	1.18127	2.26776
LGALS3BP	1.48411	2.79745	GAL	1.32558	2.50634	TAGLN2	1.18687	2.27658
C20orf195	1.50064	2.82968	TRIM72	1.32644	2.50783	NTSR1	1.18863	2.27936
INF2	1.50223	2.83280	METRNL	1.32728	2.50929	PLA2G3	1.18973	2.28110
FCGRT	1.50627	2.84075	ANKRD24	1.32741	2.50952	RAB11FIP4	1.19131	2.28360
CARD14	1.50892	2.84597	ATP2A3	1.33319	2.51959	NPTX2	1.19507	2.28956
PSPH	1.51091	2.84990	IGHD	1.34824	2.54601	SHISA2	1.19676	2.29224
HMOX1	1.53115	2.89016	GARS	1.36203	2.57047	GRIN2D	1.19818	2.29450
LINC00086	1.54867	2.92547	PLP2	1.36263	2.57154	NRTN	1.19896	2.29574
C21orf54	1.56862	2.96621	FOXO6	1.36349	2.57307	GARS	1.20165	2.30003
DNASE2	1.57115	2.97141	FLNC	1.36672	2.57884	SRL	1.20262	2.30157
ALDH1L2	1.57204	2.97325	MAPK15	1.36835	2.58175	FAM78A	1.20307	2.30229
CCR7	1.58583	3.00180	LOXL4	1.37242	2.58904	HCN2	1.20492	2.30524
CDK18	1.58859	3.00755	FABP3	1.37328	2.59059	DOC2B	1.21115	2.31522
NINJ1	1.59331	3.01741	SLC16A3	1.38075	2.60404	IL13RA1	1.21218	2.31687
C11orf96	1.59587	3.02277	KREMEN1	1.38442	2.61067	N4BP3	1.21687	2.32442
SEZ6	1.60117	3.03389	SYNGR2	1.38746	2.61618	LITAF	1.21698	2.32460
COX6B2	1.60675	3.04565	FAIM2	1.39344	2.62704	DIRAS1	1.21851	2.32706
DBH-AS1	1.61345	3.05983	IFITM1	1.39351	2.62717	PPARGC1B	1.21945	2.32858
BAI2	1.61976	3.07324	CLDN5	1.39402	2.62810	SCPEP1	1.22211	2.33288
ZFP36	1.62164	3.07725	SCN4A	1.40593	2.64989	KIAA1161	1.22247	2.33346
RPL18P13	1.64061	3.11798	LLGL2	1.40948	2.65641	APCDD1	1.22427	2.33637
MAP4K2	1.64263	3.12235	TMEM132E	1.42267	2.68081	CHST1	1.22755	2.34169
FAM83G	1.64707	3.13197	AK4	1.43221	2.69860	UBTD1	1.23441	2.35285

24 h			36 h			48 h		
Gene names	log2 fold change	fold change	Gene names	log2 fold change	fold change	Gene names	log2 fold change	fold change
EGFL7	1.65106	3.14064	NID1	1.43702	2.70761	ARL4D	1.23467	2.35328
TMC6	1.65195	3.14258	WSCD1	1.43866	2.71069	GAS2L1	1.23881	2.36004
PMAIP1	1.65661	3.15275	CBX4	1.44384	2.72044	PMEL	1.24184	2.36500
MTHFD2	1.66633	3.17406	ALDH1L2	1.44394	2.72063	ROBO3	1.24561	2.37119
PHLDA3	1.66639	3.17419	HSD17B14	1.44922	2.73060	KLHDC8A	1.24616	2.37209
FGF17	1.67814	3.20015	IMPA2	1.45164	2.73519	GPR37	1.24867	2.37622
MFAP4	1.67955	3.20328	HMOX1	1.46698	2.76443	BOK	1.25554	2.38756
ANXA11	1.68103	3.20657	ISG15	1.47351	2.77697	GAL	1.25648	2.38912
FAM71E2	1.68247	3.20977	RFPL4B	1.48722	2.80348	STXBP2	1.25655	2.38924
SH2B3	1.68597	3.21757	HBQ1	1.49329	2.81530	IRAK1	1.26026	2.39539
UAP1L1	1.70072	3.25063	EMP3	1.49332	2.81536	SNTA1	1.26028	2.39542
PRKCD	1.70197	3.25345	PIR	1.49351	2.81573	SHD	1.26597	2.40489
TUSC5	1.71758	3.28884	KIF19	1.49364	2.81599	PHYHIP	1.26975	2.41120
ANKRD9	1.72007	3.29452	CHCHD10	1.51849	2.86491	C21orf77	1.27971	2.42790
GPR142	1.72409	3.30372	SLC29A1	1.52057	2.86904	CTSL1	1.28021	2.42874
CTH	1.72671	3.30972	ZNF204P	1.52345	2.87478	SMTNL2	1.28199	2.43174
ASNS	1.73356	3.32547	PCBD1	1.52804	2.88394	B4GALNT3	1.28604	2.43858
PALM3	1.75187	3.36795	PLEKHA4	1.53342	2.89471	SH3RF3	1.28665	2.43961
EIF4EBP1	1.76126	3.38994	SLC32A1	1.53501	2.89790	PSPH	1.29339	2.45103
RHBDF1	1.76445	3.39744	TRAF5	1.53748	2.90287	CAMKK1	1.29445	2.45283
TSC22D3	1.78046	3.43536	SPINT2	1.53804	2.90400	PLP2	1.29552	2.45465
IGHD	1.79346	3.46645	GNG7	1.54147	2.91091	PHGDH	1.29663	2.45654
PHGDH	1.79528	3.47083	CCR7	1.55712	2.94266	DUSP5	1.29762	2.45823
ASS1P9	1.81736	3.52436	DBH-AS1	1.55893	2.94635	TSPAN15	1.30059	2.46330
SSTR3	1.82647	3.54668	SYPL2	1.56554	2.95988	PANX2	1.30516	2.47111
RENBP	1.83407	3.56541	ZFP36	1.56686	2.96259	RAMP2	1.31049	2.48026
CNN2	1.84385	3.58967	NINJ1	1.57338	2.97601	C1orf233	1.31428	2.48678
FAM131C	1.85972	3.62937	KLF9	1.57874	2.98709	AVPI1	1.31543	2.48876
KCNJ5	1.86202	3.63516	RD3	1.58169	2.99320	SYT7	1.31911	2.49512
DDIT4	1.86415	3.64053	GFPT2	1.58514	3.00037	FAM46C	1.31915	2.49519
SLC3A2	1.87323	3.66352	EIF4EBP1	1.60286	3.03745	FAIM2	1.32388	2.50338
SESN2	1.87641	3.67160	RRAS	1.60996	3.05243	TNFAIP2	1.32626	2.50752
GPT2	1.89126	3.70959	CD248	1.61001	3.05254	SH3BP4	1.33141	2.51649
SYNPO	1.91914	3.78198	PHGDH	1.61254	3.05790	RHPN2	1.33271	2.51875
PSAT1	1.93126	3.81388	PLCB2	1.61358	3.06010	ARID5A	1.33381	2.52067
SLC16A14	1.93429	3.82190	P2RX2	1.61831	3.07015	NOXA1	1.33896	2.52969
TMEM52	1.96602	3.90689	PSPH	1.63701	3.11021	MTHFD2	1.34102	2.53330
NQO1	1.96878	3.91437	C11orf96	1.63925	3.11504	PADI2	1.34166	2.53443
RREB1	1.96937	3.91597	MTHFD2	1.64445	3.12629	FMNL1	1.34287	2.53655
CHRND	1.98158	3.94925	SH2B3	1.65978	3.15968	EML2	1.35169	2.55211
NKD2	1.99015	3.97278	RHOV	1.66173	3.16396	EIF4EBP1	1.35451	2.55710
TSPO	1.99044	3.97358	PPP1R1A	1.66362	3.16810	SLC12A4	1.35463	2.55732
PTPRH	1.99363	3.98238	IQCA1	1.66862	3.17910	GLT25D2	1.35761	2.56260
KCNK3	1.99531	3.98702	C20orf195	1.67189	3.18632	PPAPDC3	1.35847	2.56413
NPAS1	2.00919	4.02556	ASNS	1.67748	3.19869	ICAM5	1.36046	2.56767
MRC2	2.01471	4.04099	INF2	1.68011	3.20452	AEBP1	1.37348	2.59095



24 h			36 h			48 h		
Gene names	log2 fold change	fold change	Gene names	log2 fold change	fold change	Gene names	log2 fold change	fold change
SLC12A7	2.03046	4.08535	FAM131C	1.68072	3.20588	ZBTB42	1.38241	2.60704
CPLX3	2.04945	4.13948	LINC00086	1.68323	3.21146	TNNI1	1.38708	2.61549
NHLH1	2.05572	4.15751	SLC16A14	1.69623	3.24053	RHPN1-AS1	1.39001	2.62080
NR4A1	2.08392	4.23958	GPT2	1.70655	3.26379	NEUROD4	1.39045	2.62160
SERPINF1	2.12596	4.36493	MAL	1.70751	3.26597	HMOX1	1.39852	2.63631
RGS16	2.12695	4.36793	CPNE2	1.71026	3.27220	SYT2	1.40608	2.65016
DDIT3	2.16534	4.48572	COL9A2	1.72214	3.29925	FLNC	1.40942	2.65630
TSHZ3	2.17587	4.51858	EGFL7	1.72254	3.30017	PCBD1	1.40997	2.65732
ECEL1	2.18225	4.53861	TUSC5	1.72271	3.30056	PDLIM3	1.41388	2.66453
SLC6A17	2.21747	4.65077	PMAIP1	1.73394	3.32635	S100A6	1.41621	2.66883
VEGFA	2.22587	4.67793	LGALS3BP	1.73504	3.32889	H1FO	1.41936	2.67467
ASS1P7	2.24249	4.73213	DNASE2	1.73948	3.33915	METRNL	1.41956	2.67504
KCNQ1	2.27494	4.83978	MFAP4	1.75075	3.36533	BAIAP2-AS1	1.42416	2.68358
C19orf66	2.29513	4.90798	RHBDF1	1.75813	3.38259	HSD17B14	1.43078	2.69592
TRPV2	2.31893	4.98962	ATHL1	1.76528	3.39940	PMAIP1	1.43367	2.70133
AGT	2.34252	5.07188	KCNH6	1.76624	3.40166	CBX4	1.43445	2.70279
AMBP	2.41753	5.34256	KCNJ4	1.77449	3.42117	C5orf65	1.44596	2.72444
ASS1P11	2.43305	5.40034	CHRND	1.77681	3.42668	IFITM1	1.45613	2.74371
ELFN2	2.43715	5.41571	SESN2	1.78406	3.44394	SLCO4C1	1.46504	2.76071
PTGIR	2.46542	5.52288	PSAT1P3	1.79301	3.46537	SIT1	1.46627	2.76307
GABRD	2.48174	5.58571	TMEM176A	1.79368	3.46698	SGPP2	1.47186	2.77379
ASS1	2.50775	5.68732	FCGRT	1.80102	3.48467	NMB	1.48307	2.79543
C20orf26	2.54707	5.84446	QPCT	1.80846	3.50268	ZNF600	1.48323	2.79574
ATF3	2.59503	6.04202	FAM83G	1.81388	3.51587	FOXO6	1.48399	2.79721
ULBP1	2.61896	6.14307	NACC2	1.81718	3.52392	COL18A1	1.49284	2.81442
PDE10A	2.62275	6.15923	UAP1L1	1.82761	3.54949	ABHD15	1.49441	2.81749
SRCRB4D	2.69473	6.47433	PRKCD	1.84624	3.59562	ATP2A3	1.49752	2.82357
SLC7A5	2.70024	6.49910	SLC3A2	1.87339	3.66393	RHBDF2	1.49838	2.82525
TNS1	2.70882	6.53787	KLK1	1.88406	3.69112	ASNS	1.50083	2.83005
KLF15	2.75003	6.72731	CPT1A	1.90043	3.73324	GAS6	1.50491	2.83807
EFHD1	2.79888	6.95900	PALM3	1.90491	3.74486	PIR	1.51769	2.86332
AKNA	2.88267	7.37514	NR4A1	1.90573	3.74698	TTYH2	1.51863	2.86519
CHAC1	2.95307	7.74395	TSC22D3	1.93204	3.81594	SESN2	1.52185	2.87159
TRIB3	3.00115	8.00638	EPHA2	1.93753	3.83049	SH2B3	1.52255	2.87298
FGF19	3.14917	8.87145	SHMT2	1.95049	3.86506	CCR7	1.52344	2.87476
DDR2	3.17641	9.04055	SEZ6	1.95704	3.88265	GPT2	1.53102	2.88990
RPL18P11	3.30351	9.87315	SCARF1	1.98835	3.96783	CHCHD10	1.53457	2.89702
SLC16A6	3.38637	10.45680	SPOCK2	1.99031	3.97322	EPDR1	1.53611	2.90011
GDF15	3.42196	10.71797	C21orf54	2.03243	4.09093	S100A4	1.53874	2.90541
CDC42EP1	3.52807	11.53599	CLDN6	2.04044	4.11371	FABP3	1.54018	2.90831
INHBE	3.53392	11.58286	ECEL1	2.04166	4.11719	ZNF204P	1.54026	2.90847
ATF5	3.64119	12.47692	ANXA11	2.04512	4.12708	WSCD1	1.54935	2.92685
CEBPB	3.80628	13.98957	NQO1	2.06382	4.18092	CCDC155	1.57887	2.98736
STC2	3.84981	14.41811	NHLH1	2.07226	4.20545	BDKRB2	1.58103	2.99183
ADM2	3.91178	15.05092	CNN2	2.07294	4.20743	AIF1L	1.58361	2.99719
PCK2	3.93925	15.34025	SYNPO	2.07722	4.21993	RD3	1.58376	2.99750

24 h		
Gene names	log2 fold change	fold change
TRIM66	4.10317	17.18610
SLC7A3	4.42116	21.42406
P2RX1	4.61411	24.48982
MIOX	4.69223	25.85247
JDP2	4.69829	25.96129
UNC5B	4.89681	29.79111
SLC7A11	5.21444	37.12811

36 h		
Gene names	log2 fold change	fold change
DDIT4	2.08973	4.25668
COX6B2	2.09087	4.26005
KCNJ5	2.10595	4.30481
NPAS1	2.11092	4.31967
BLVRB	2.13245	4.38461
GPR142	2.14357	4.41854
SH3KBP1	2.14805	4.43228
RGS16	2.16793	4.49378
TMEM52	2.21224	4.63394
SSTR3	2.21226	4.63401
TMC6	2.21643	4.64742
TSHZ3	2.22816	4.68536
PLXND1	2.23531	4.70864
DDIT3	2.27501	4.84001
TICAM1	2.28497	4.87354
MRC2	2.29687	4.91391
ASS1P9	2.32711	5.01799
FOXS1	2.33291	5.03821
KCNK3	2.33983	5.06243
PTPRH	2.34318	5.07420
SERPINF1	2.36921	5.16658
KLF15	2.39114	5.24572
A4GALT	2.39738	5.26846
VEGFA	2.41039	5.31618
ELFN2	2.44699	5.45277
ULBP1	2.44742	5.45440
ASS1	2.45045	5.46587
ADRA2B	2.45296	5.47538
SLC6A17	2.48516	5.59896
TSPO	2.51172	5.70300
CPLX3	2.53348	5.78967
CREB3L1	2.59919	6.05946
TNS1	2.60817	6.09730
ATF3	2.63674	6.21925
SBK2	2.75138	6.73361
SLC7A5	2.76072	6.77734
AGT	2.79726	6.95119
PTGIR	2.82218	7.07230
AMBP	2.83434	7.13216
TRPV2	2.88961	7.41070
AKNA	2.91475	7.54097
CLDN4	2.92778	7.60939
C19orf66	2.98757	7.93137
HCK	3.02361	8.13200
TRIB3	3.10669	8.61404
MOCOS	3.12816	8.74319

48 h		
Gene names	log2 fold change	fold change
GNG7	1.58496	2.99999
ANKRD24	1.59128	3.01317
PHLDA3	1.59373	3.01829
SIX3	1.61275	3.05834
GFPT2	1.61643	3.06615
SYPL2	1.61769	3.06883
CACNG5	1.62429	3.08290
NQO1	1.63248	3.10046
KCNT1	1.63295	3.10147
CLEC4G	1.63703	3.11025
TNNI3	1.64688	3.13156
LOXL4	1.65438	3.14788
PLEKHA4	1.65672	3.15299
PSAT1	1.66471	3.17050
CPNE2	1.66485	3.17081
LLGL2	1.66815	3.17807
MFAP4	1.67325	3.18932
C11orf96	1.67548	3.19426
MPO	1.67671	3.19698
SLC29A1	1.67973	3.20368
PLCB2	1.68718	3.22027
IMPA2	1.68732	3.22058
TRIM72	1.68974	3.22599
DBH-AS1	1.69807	3.24467
FAM131C	1.70206	3.25365
DNASE2	1.71724	3.28807
TMEM132E	1.71873	3.29147
SOWAHA	1.72313	3.30152
AK4	1.72632	3.30883
PALD1	1.72761	3.31179
SLC3A2	1.73169	3.32117
SPINT2	1.73199	3.32186
NID1	1.74575	3.35369
EMP3	1.74577	3.35374
MYO1D	1.75756	3.38126
AXL	1.76959	3.40957
BCAM	1.77412	3.42029
NEUROD2	1.78017	3.43467
RYR1	1.78391	3.44358
EPPK1	1.80591	3.49650
TSC22D3	1.80756	3.50050
HBQ1	1.80973	3.50577
ANKRD9	1.82054	3.53213
FAM163B	1.82183	3.53529
INF2	1.82632	3.54631
CD248	1.84156	3.58397

24 h			36 h			48 h		
Gene names	log2 fold change	fold change	Gene names	log2 fold change	fold change	Gene names	log2 fold change	fold change
			C20orf26	3.13366	8.77659	RRAS	1.84614	3.59537
			CLDN3	3.22286	9.33636	SLC16A3	1.84765	3.59913
			SRCRB4D	3.28978	9.77963	RILP	1.85901	3.62759
			EFHD1	3.31152	9.92812	SLC9A5	1.88063	3.68236
			GDF15	3.36644	10.31334	TMEM176B	1.88137	3.68425
			DDR2	3.37525	10.37651	KCNJ4	1.88752	3.69999
			INHBE	3.37807	10.39682	ISG15	1.89473	3.71852
			GABRD	3.38783	10.46739	CDK18	1.89526	3.71989
			SLC16A6	3.51215	11.40939	QPCT	1.89807	3.72714
			ATF5	3.68873	12.89491	KISS1	1.90167	3.73645
			ADM2	3.72819	13.25248	TUSC5	1.93427	3.82185
			TBXA2R	3.72933	13.26295	MAPK15	1.93439	3.82216
			CDC42EP1	3.73692	13.33291	CLDN5	1.94507	3.85056
			CEBPB	3.76414	13.58686	AHNAK2	1.94736	3.85668
			CHST3	3.77015	13.64358	KLF9	1.95168	3.86825
			STC2	3.85904	14.51065	CHRND	1.95707	3.88273
			PCK2	3.92436	15.18274	CRYL1	1.96672	3.90878
			TRIM66	4.05362	16.60585	LGALS3BP	1.99422	3.98401
			JDP2	4.51907	22.92850	PALM3	2.00441	4.01225
			MIOX	4.64133	24.95626	SNCB	2.00569	4.01581
			UNC5B	4.98093	31.57980	CPT1A	2.00654	4.01817
			P2RX1	4.98248	31.61374	IQCA1	2.00783	4.02177
			SLC7A11	5.25705	38.24104	KLK1	2.02029	4.05665
						FCGRT	2.02325	4.06498
						P2RX2	2.02677	4.07492
						SCN4A	2.03011	4.08436
						MAP4K2	2.03621	4.10167
						NHLH1	2.04064	4.11428
						KIF19	2.04607	4.12979
						CPNE9	2.04673	4.13168
						FAM83G	2.04839	4.13644
						CXCR7	2.05356	4.15129
						RBM24	2.06734	4.19113
						RGS16	2.06783	4.19256
						ECEL1	2.06826	4.19381
						PRKCD	2.06934	4.19695
						ITGA2B	2.07281	4.20705
						TMEM176A	2.09093	4.26023
						ADAM33	2.09411	4.26963
						USH1G	2.09822	4.28181
						PRAME	2.09887	4.28374
						SPOCK2	2.11687	4.33752
						NKD2	2.12001	4.34697
						ATHL1	2.12377	4.35831
						TMEM190	2.13251	4.38480
						EGFL7	2.14075	4.40991



24 h		
Gene names	log2 fold change	fold change

36 h		
Gene names	log2 fold change	fold change

48 h		
Gene names	log2 fold change	fold change
UAP1L1	2.15803	4.46305
MAL	2.16383	4.48103
EPHA2	2.17611	4.51933
ASS1P9	2.18543	4.54862
COL9A2	2.20105	4.59814
C21orf54	2.20645	4.61538
SEZ6	2.21639	4.64729
NACC2	2.21776	4.65171
RHBDF1	2.22029	4.65987
KCNH6	2.22233	4.66646
DDIT3	2.22548	4.67666
ANXA11	2.23145	4.69606
SSTR3	2.24583	4.74310
CFC1	2.24953	4.75528
GMPR	2.27919	4.85405
ASS1P11	2.29095	4.89378
RAC2	2.33526	5.04642
ISLR	2.34135	5.06777
ASS1P7	2.34344	5.07511
TNFRSF1B	2.34719	5.08832
NPAS1	2.34719	5.08832
ATF3	2.36702	5.15874
FAM71E2	2.39745	5.26871
PTPRH	2.40524	5.29724
BLVRB	2.42525	5.37122
CA4	2.42614	5.37454
CNN2	2.43443	5.40551
KCNK3	2.43793	5.41864
TMEM52	2.44479	5.44446
PLXND1	2.49594	5.64096
SYNPO	2.50535	5.67787
AMBP	2.54369	5.83078
TNS1	2.54462	5.83454
TICAM1	2.58939	6.01844
RREB1	2.61216	6.11418
SLC7A5	2.61515	6.12687
FUT1	2.64416	6.25132
TMC6	2.67572	6.38958
MRC2	2.68062	6.41131
KLF15	2.68188	6.41692
FOXS1	2.68604	6.43545
CHAC1	2.69232	6.46352
COX6B2	2.71095	6.54753
ADRA2B	2.73015	6.63525
A4GALT	2.73855	6.67399
CLDN6	2.74265	6.69299

24 h		
Gene names	log2 fold change	fold change

36 h		
Gene names	log2 fold change	fold change

48 h		
Gene names	log2 fold change	fold change
PDE10A	2.85378	7.22892
TSPO	2.85889	7.25457
CREB3L1	2.89887	7.45842
TRIB3	2.90119	7.47042
AGT	2.92474	7.59337
C8orf4	2.95919	7.77687
CPLX3	2.98317	7.90722
SLC16A6	2.99877	7.99318
KCNQ1	3.05514	8.31168
SBK2	3.06694	8.37994
PTGIR	3.07609	8.43326
INHBE	3.10218	8.58715
ELFN2	3.12142	8.70244
C20orf26	3.12255	8.70926
GDF15	3.15249	8.89189
IGSF21	3.20444	9.21791
PRSS8	3.25052	9.51709
FBXO27	3.25749	9.56318
C19orf66	3.29823	9.83708
EFHD1	3.36463	10.30041
TRPV2	3.44489	10.88968
CLDN4	3.47955	11.15447
ATF5	3.49733	11.29279
CEBPB	3.53446	11.58720
FGF19	3.54439	11.66723
ADM2	3.54569	11.67775
STC2	3.60145	12.13793
SRCRB4D	3.73787	13.34169
HCK	3.74123	13.37280
CLDN3	3.74254	13.38495
TRIM66	3.83779	14.29848
CDC42EP1	4.10273	17.18086
GABRD	4.11708	17.35260
JDP2	4.14007	17.63134
RASD2	4.14351	17.67343
TBXA2R	4.18509	18.19021
CHST3	4.32111	19.98866
C20orf203	4.43792	21.67440
SLC7A3	4.57942	23.90797
UNC5B	4.97408	31.43021
SLC7A11	5.03688	32.82857
P2RX1	5.07955	33.81403

Cluster 1 (down-regulated genes)		Cluster 2 (up-regulated genes)	
GO term	p-value	GO term	p-value
protein-DNA complex subunit organization	1.99E-03	hydrogen sulfide metabolic process	1.17E-03
protein-DNA complex assembly	1.23E-03	hydrogen sulfide biosynthetic process	1.17E-03
growth	9.29E-04	regulation of glucocorticoid metabolic process	8.91E-04
mitotic cell cycle	8.00E-08	positive regulation of neuron death	8.39E-03
organelle fission	4.63E-05	organic acid transport	1.14E-03
nuclear division	2.37E-05	anion transport	4.27E-03
chromosome organization	5.23E-09	organic anion transport	4.41E-03
kinetochore organization	1.79E-02	carboxylic acid transport	1.07E-03
cell division	1.55E-06	amino acid transport	1.73E-05
chromosome segregation	2.33E-08	branched-chain amino acid transport	6.98E-03
response to DNA damage stimulus	5.52E-03	neutral amino acid transport	1.79E-04
cell cycle phase	1.55E-07	leucine transport	6.98E-03
M phase	1.23E-05	cellular response to biotic stimulus	5.76E-03
M phase of mitotic cell cycle	3.13E-05	response to unfolded protein	1.71E-02
interphase	1.17E-04	response to hormone stimulus	5.85E-03
interphase of mitotic cell cycle	7.88E-05	response to organic nitrogen	5.47E-04
mitosis	2.37E-05	response to amine stimulus	4.84E-03
mitotic prometaphase	1.92E-03	response to acid	1.75E-02
G1/S transition of mitotic cell cycle	6.34E-04	response to amino acid stimulus	9.00E-03
sister chromatid segregation	9.64E-06	response to endoplasmic reticulum stress	5.16E-04
mitotic sister chromatid segregation	1.58E-04	cellular response to topologically incorrect protein	1.75E-02
mitotic metaphase/anaphase transition	1.70E-03	cellular response to unfolded protein	9.97E-03
regulation of transcription involved in G1/S phase of mitotic cell cycle	2.97E-03	ER-nucleus signaling pathway	1.67E-02
regulation of cell cycle	9.28E-05	endoplasmic reticulum unfolded protein response	9.47E-03
regulation of cell cycle process	5.66E-06	intrinsic apoptotic signaling pathway	3.69E-03
negative regulation of cell cycle process	4.16E-03	intrinsic apoptotic signaling pathway in response to endoplasmic reticulum stress	1.40E-02
regulation of mitotic cell cycle	5.42E-05	adrenal gland development	1.79E-02
regulation of G2/M transition of mitotic cell cycle	3.10E-04	folic acid-containing compound metabolic process	2.00E-02
negative regulation of cell cycle	3.94E-05	tetrahydrofolate metabolic process	5.83E-03
cell cycle arrest	4.74E-05	carboxylic acid metabolic process	3.64E-07
regulation of cell cycle arrest	1.09E-05	cellular amino acid metabolic process	4.02E-10
cell cycle checkpoint	4.71E-06	amino acid activation	1.00E-05
spindle checkpoint	3.73E-05	alpha-amino acid metabolic process	1.01E-04
spindle assembly checkpoint	4.46E-04	serine family amino acid metabolic process	1.62E-06
G2/M transition checkpoint	1.78E-02	homoserine metabolic process	1.17E-03
mitotic cell cycle checkpoint	3.65E-06	L-serine metabolic process	1.77E-08
mitotic cell cycle spindle checkpoint	1.95E-05	organonitrogen compound biosynthetic process	3.46E-04
mitotic cell cycle G2/M transition checkpoint	2.90E-04	single-organism biosynthetic process	4.43E-04
regulation of chromosome segregation	3.38E-03	small molecule biosynthetic process	1.64E-03
regulation of growth	1.53E-02	organic acid biosynthetic process	7.91E-05
negative regulation of gene expression	4.09E-03	carboxylic acid biosynthetic process	7.91E-05
regulation of nuclear division	3.83E-03	cellular amino acid biosynthetic process	2.71E-08
regulation of mitosis	3.83E-03	serine family amino acid biosynthetic process	9.81E-09
regulation of mitotic metaphase/anaphase transition	1.02E-03	alpha-amino acid biosynthetic process	2.06E-07
glycosaminoglycan metabolic process	1.93E-02	L-serine biosynthetic process	4.99E-08
regeneration	1.27E-02	tRNA metabolic process	3.30E-04
cell part morphogenesis	7.61E-03	tRNA aminoacylation	1.00E-05
cell projection morphogenesis	6.49E-03	tRNA aminoacylation for protein translation	5.93E-06
negative regulation of nuclear division	9.26E-04	cysteine biosynthetic process	6.98E-03
negative regulation of mitosis	9.26E-04	transsulfuration	1.17E-03
negative regulation of mitotic metaphase/anaphase transition	4.46E-04	ligase activity	8.60E-05
mitotic cell cycle spindle assembly checkpoint	3.97E-04	ligase activity, forming carbon-oxygen bonds	3.35E-06
cell morphogenesis involved in differentiation	2.54E-03	ligase activity, forming aminoacyl-tRNA and related compounds	3.35E-06
DNA conformation change	1.51E-07	aminoacyl-tRNA ligase activity	3.35E-06
DNA packaging	3.33E-06	organic acid transmembrane transporter activity	2.04E-03
chromosome condensation	7.82E-06	organic anion transmembrane transporter activity	4.24E-03
DNA recombination	4.89E-03	carboxylic acid transmembrane transporter activity	1.74E-03
mitotic recombination	1.23E-02	amino acid transmembrane transporter activity	1.75E-04
DNA strand elongation	1.33E-02	neutral amino acid transmembrane transporter activity	3.33E-04
DNA replication	4.05E-04	L-proline transmembrane transporter activity	1.16E-02
DNA-dependent DNA replication	2.01E-04	identical protein binding	1.40E-02
DNA strand elongation involved in DNA replication	1.05E-02	protein homodimerization activity	6.20E-03
DNA repair	9.90E-03	methylenetetrahydrofolate dehydrogenase (NADP+) activity	6.98E-03
base-excision repair	1.55E-02	cofactor binding	2.39E-03
regulation of DNA metabolic process	2.43E-03	vitamin B6 binding	1.02E-03
regulation of nervous system development	9.90E-03	pyridoxal phosphate binding	1.02E-03
chromatin assembly or disassembly	9.68E-03	negative regulation of skeletal muscle tissue development	3.20E-02
chromatin assembly	5.12E-03	cellular carbohydrate metabolic process	2.55E-02
brain development	7.87E-03	glucocorticoid metabolic process	2.74E-02
forebrain development	3.45E-04	regulation of hormone metabolic process	2.23E-02
neuron projection development	1.03E-02	regulation of glucocorticoid biosynthetic process	3.20E-02
neuron projection morphogenesis	6.51E-03	proline transport	2.41E-02
neuron projection regeneration	1.05E-02	response to abiotic stimulus	2.21E-02
cell morphogenesis involved in neuron differentiation	6.00E-03	cellular response to molecule of bacterial origin	2.75E-02
axonogenesis	2.78E-03	cellular response to lipopolysaccharide	2.26E-02
axon regeneration	5.98E-03	response to topologically incorrect protein	2.68E-02
gliogenesis	3.88E-03	response to organic cyclic compound	2.49E-02
glial cell differentiation	1.48E-02	response to steroid hormone stimulus	4.43E-02
diencephalon development	5.71E-03	pteridine-containing compound metabolic process	3.62E-02
microtubule anchoring	1.14E-02	one-carbon metabolic process	3.31E-02
attachment of spindle microtubules to chromosome	1.93E-03	tetrahydrofolate interconversion	2.41E-02
attachment of spindle microtubules to kinetochore	1.40E-03	ncRNA metabolic process	4.96E-02
pituitary gland development	1.22E-03	cysteine metabolic process	4.10E-02
mRNA processing	1.42E-02	icosatetraenoic acid binding	2.41E-02
kinetochore assembly	1.47E-02	tRNA binding	3.96E-02



Cluster 1 (down-regulated genes)	
GO term	p-value
positive regulation of pseudopodium assembly	1.79E-02
mitotic cell cycle G2/M transition DNA damage checkpoint	6.93E-03
regulation of attachment of spindle microtubules to kinetochore	9.97E-05
retroviral genome replication	1.18E-02
regulation of retroviral genome replication	6.93E-03
canonical Wnt receptor signaling pathway	7.83E-03
regulation of canonical Wnt receptor signaling pathway	1.01E-02
negative regulation of canonical Wnt receptor signaling pathway	1.01E-02
striated muscle tissue development	1.81E-02
response to drug	1.72E-04
positive regulation of cell death	5.67E-03
positive regulation of programmed cell death	1.78E-02
positive regulation of apoptotic process	1.64E-02
inositol lipid-mediated signaling	2.04E-03
phosphatidylinositol-mediated signaling	2.04E-03
protein-DNA complex	3.09E-03
nuclear periphery	2.13E-04
nuclear matrix	1.24E-04
chromosome	6.68E-06
condensed chromosome	9.95E-07
chromosomal part	6.58E-07
chromosome, centromeric region	2.81E-04
condensed chromosome, centromeric region	1.40E-04
kinetochore	2.06E-05
condensed chromosome kinetochore	8.92E-05
condensin complex	4.97E-03
paraspeckles	4.97E-03
protein heterodimerization activity	1.12E-02
structure-specific DNA binding	5.26E-03
mRNA binding	2.33E-03
poly(A) RNA binding	1.79E-02
response to abiotic stimulus	3.95E-02
regulation of binding	4.72E-02
centromere complex assembly	2.78E-02
pseudopodium organization	4.33E-02
positive regulation of response to DNA damage stimulus	2.62E-02
G2/M transition of mitotic cell cycle	2.27E-02
regulation of interphase of mitotic cell cycle	3.76E-02
nucleosome organization	4.41E-02
regulation of cellular response to stress	2.09E-02
negative regulation of cellular macromolecule biosynthetic process	3.62E-02
negative regulation of transcription, DNA-dependent	4.09E-02
aminoglycan metabolic process	2.46E-02
regulation of anatomical structure morphogenesis	3.07E-02
regulation of organ morphogenesis	2.27E-02
negative regulation of organelle organization	2.80E-02
mitotic chromosome condensation	2.52E-02
maintenance of location in cell	4.61E-02
regulation of DNA replication	3.59E-02
nucleosome assembly	2.60E-02
central nervous system development	2.66E-02
pseudopodium assembly	3.83E-02
regulation of pseudopodium assembly	2.14E-02
neuron development	2.93E-02
astrocyte differentiation	2.18E-02
regulation of neurogenesis	2.08E-02
maintenance of protein location in cell	3.25E-02
RNA processing	3.01E-02
RNA splicing, via transesterification reactions	2.99E-02
RNA splicing, via transesterification reactions with bulged adenosine as nucleophile	2.70E-02
mRNA splicing, via spliceosome	2.70E-02
regulation of glial cell differentiation	2.78E-02
negative regulation of neuron differentiation	4.28E-02
negative regulation of astrocyte differentiation	2.52E-02
histone phosphorylation	4.33E-02
negative regulation of microtubule depolymerization	4.85E-02
sulfur compound biosynthetic process	4.21E-02
pteridine-containing compound biosynthetic process	4.33E-02
folic acid-containing compound biosynthetic process	2.14E-02
regulation of Wnt receptor signaling pathway	4.72E-02
negative regulation of Wnt receptor signaling pathway	3.95E-02
tetrahydrofolate metabolic process	4.85E-02
somatic stem cell maintenance	2.47E-02
proteasomal protein catabolic process	3.98E-02
proteasomal ubiquitin-dependent protein catabolic process	3.42E-02
muscle tissue development	2.28E-02
muscle structure development	5.00E-02
muscle organ development	3.46E-02
response to organic cyclic compound	2.59E-02
replication fork	2.18E-02
nucleosome	4.75E-02
condensed chromosome outer kinetochore	2.14E-02
phospholipase binding	3.37E-02
damaged DNA binding	2.47E-02
RNA binding	2.88E-02
gamma-catenin binding	2.14E-02
poly-purine tract binding	3.37E-02

Cluster 2 (up-regulated genes)	
GO term	p-value

Cluster 5 (down-regulated genes after 24 h)	
GO term	p-value
paraspeckles	2.66e-02

Cluster 6 (up-regulated genes after 24 h)	
GO term	p-value
organonitrogen compound biosynthetic process	1.46E-02
single-organism biosynthetic process	1.24E-02
small molecule biosynthetic process	9.87E-03
carboxylic acid metabolic process	8.96E-04
organic acid biosynthetic process	7.96E-04
carboxylic acid biosynthetic process	7.96E-04
cellular amino acid metabolic process	2.62E-05
alpha-amino acid metabolic process	2.75E-03
serine family amino acid metabolic process	1.02E-05
L-serine metabolic process	1.72E-07
cellular amino acid biosynthetic process	1.60E-06
serine family amino acid biosynthetic process	5.98E-08
alpha-amino acid biosynthetic process	5.25E-07
L-serine biosynthetic process	7.73E-07
response to endoplasmic reticulum stress	3.70E-02
regulation of glucocorticoid metabolic process	2.23E-02
response to organic nitrogen	2.18E-02
homoserine metabolic process	4.62E-02
transsulfuration	4.62E-02
hydrogen sulfide metabolic process	4.62E-02
hydrogen sulfide biosynthetic process	4.62E-02

GO terms of down-regulated genes	
GO term	p-value
oxidative phosphorylation	6.16E-04
respiratory electron transport chain	2.33E-03
ATP synthesis coupled electron transport	1.43E-04
mitochondrial ATP synthesis coupled electron transport	1.43E-04
mitotic cell cycle	9.98E-18
regulation of cell cycle	1.00E-08
regulation of mitotic cell cycle	3.65E-06
negative regulation of cell cycle	4.25E-08
organelle fission	6.39E-16
nuclear division	8.60E-17
chromosome organization	7.64E-05
cell division	1.11E-12
chromosome segregation	6.05E-08
regulation of chromosome segregation	9.83E-03
microtubule-based process	4.84E-05
microtubule cytoskeleton organization	1.17E-02
cell cycle phase	3.45E-16
M phase	5.73E-14
M phase of mitotic cell cycle	1.98E-16
spindle organization	1.03E-04
interphase	4.00E-07
interphase of mitotic cell cycle	1.80E-07
mitosis	8.60E-17
mitotic prometaphase	9.81E-06
regulation of cell cycle process	1.19E-10
G1/S transition of mitotic cell cycle	6.44E-04
cell cycle arrest	3.93E-07
regulation of cell cycle arrest	2.00E-07
cell cycle checkpoint	4.29E-08
spindle checkpoint	5.69E-04
mitotic cell cycle checkpoint	4.97E-05
mitotic cell cycle spindle checkpoint	4.97E-03
positive regulation of cell cycle process	1.34E-02
sister chromatid segregation	1.21E-06
mitotic sister chromatid segregation	1.48E-05
mitotic spindle organization	1.51E-04
mitotic metaphase/anaphase transition	1.70E-03
regulation of transcription involved in G1/S phase of mitotic cell cycle	6.13E-06
regulation of nuclear division	5.21E-04
negative regulation of nuclear division	1.07E-02
regulation of mitosis	5.21E-04
regulation of mitotic metaphase/anaphase transition	6.73E-04
negative regulation of mitosis	1.07E-02
negative regulation of mitotic metaphase/anaphase transition	3.53E-03
regulation of G2/M transition of mitotic cell cycle	2.02E-03
DNA packaging	6.67E-03
chromosome condensation	6.12E-05
DNA replication	3.56E-05
mitotic cell cycle G2/M transition checkpoint	8.18E-03
chromosome localization	9.83E-03
establishment of chromosome localization	9.83E-03
cell morphogenesis involved in differentiation	2.69E-03
central nervous system development	7.21E-03
regulation of cell development	4.59E-03
regulation of nervous system development	7.80E-04

GO terms of up-regulated genes	
GO term	p-value
muscle system process	9.49E-03
circulatory system development	1.17E-02
cardiovascular system development	1.17E-02
synaptic transmission	1.75E-02
angiogenesis	4.36E-03
regulation of angiogenesis	1.03E-02
organonitrogen compound biosynthetic process	6.57E-03
cellular amino acid biosynthetic process	3.01E-03
serine family amino acid biosynthetic process	1.70E-02
alpha-amino acid biosynthetic process	7.87E-03
L-serine biosynthetic process	3.38E-04
substrate-specific transmembrane transporter activity	2.70E-03
ion transmembrane transporter activity	6.66E-04
cation transmembrane transporter activity	1.03E-03
metal ion transmembrane transporter activity	9.97E-03
cation channel activity	7.90E-03
voltage-gated cation channel activity	7.41E-03
response to lipid	3.89E-02
muscle contraction	2.22E-02
multicellular organismal signaling	4.53E-02
blood vessel development	3.38E-02
blood vessel morphogenesis	3.29E-02
regulation of vasculature development	2.35E-02
L-serine metabolic process	2.22E-02
passive transmembrane transporter activity	2.28E-02
channel activity	2.28E-02
substrate-specific channel activity	3.16E-02
ion channel activity	2.33E-02



GO term	GO terms of down-regulated genes	p-value
	regulation of neurogenesis	7.68E-04
	chromosome passenger complex	1.00E-02
	midbody	5.90E-03
	chromosome	4.53E-05
	condensed chromosome	1.71E-03
	chromosomal part	1.25E-04
	chromosome, centromeric region	2.27E-04
	condensed chromosome, centromeric region	1.14E-04
	condensed nuclear chromosome, centromeric region	1.74E-02
	kinetochore	3.75E-03
	condensed chromosome kinetochore	6.82E-04
	microtubule cytoskeleton	2.29E-05
	spindle	3.28E-10
	spindle pole	2.09E-03
	electron transport chain	2.41E-02
	cellular respiration	4.64E-02
	DNA conformation change	3.24E-02
	trigeminal nerve development	4.93E-02
	brain development	3.19E-02
	regulation of neuron differentiation	3.57E-02
	respiratory chain	2.05E-02

GO term	GO terms of up-regulated genes	p-value
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