

Supplementary table 4. Phenotype specific gene expression

Gene ID	Epigenetic Silencing	Epigenetic repressio	n	Median expression (fluorescence)					T test difference in expression (p value shown)							
				Expression change in UCC	median normal	median UCC	median NMI	median INV	median all UCC	Difference between UCC and normal	N vs. CIS	N vs NMI	N vs INV	CIS vs. NMI	CIS vs. INV	NMI vs. INV
NM_004546	0	1	-1	485.5	1029.7	1299.0	1223.8	1110.2	624.7	0.801	0.028	0.004	0.195	0.074	0.114	0.022
NM_004894	0	1	-1	508.2	741.0	952.1	1105.3	1063.9	555.7	0.002	0.996	0.459	0.002	0.008	0.476	0.926
NM_007100	0	1	-1	319.8	553.6	866.7	695.1	764.2	444.4	0.819	0.186	0.738	0.540	0.663	0.054	0.524
NM_018935	0	1	-1	4055.7	4412.7	5026.9	3865.9	4472.2	416.5	0.049	0.702	0.087	0.089	0.439	0.187	0.166
NM_001316	0	1	-1	115.5	226.6	405.7	476.2	404.2	288.8	0.513	0.132	0.030	0.077	0.029	0.040	0.122
NM_004607	0	1	-1	195.5	364.7	459.4	422.6	444.5	249.1	0.055	0.005	0.692	0.001	0.027	0.014	0.226
NM_017866	0	1	-1	113.0	328.4	263.9	331.7	331.8	218.8	0.108	0.003	0.040	0.011	0.017	0.123	0.059
NM_003472	0	1	-1	167.3	241.3	229.7	450.7	382.0	214.7	0.411	0.015	0.000	0.352	0.019	0.010	0.001
NM_001316	0	1	-1	78.4	146.4	242.7	341.6	282.9	204.5	0.235	0.024	0.071	0.001	0.003	0.475	0.054
NM_004927	0	1	-1	376.7	384.2	564.2	601.4	559.7	183.0	0.986	0.071	0.173	0.154	0.196	0.614	0.054
NM_004546	0	1	-1	165.3	271.9	331.6	390.8	330.0	164.7	0.639	0.001	0.000	0.007	0.000	0.079	0.000
NM_001033	0	1	-1	103.0	220.9	216.5	308.3	247.8	144.8	0.473	0.002	0.000	0.007	0.000	0.279	0.000
NM_016647	0	1	-1	203.0	174.9	438.8	190.8	342.8	139.8	0.009	0.062	0.000	0.868	0.009	0.158	0.001
NM_007100	0	1	-1	141.7	202.5	296.8	232.8	278.1	136.5	0.005	0.005	0.115	0.001	0.001	0.148	0.224
NM_016359	0	1	-1	72.7	101.9	152.3	251.3	207.7	135.0	0.226	0.120	0.002	0.678	0.627	0.135	0.005
NM_014597	0	1	-1	182.5	267.2	264.9	347.6	315.9	133.4	0.022	0.648	0.000	0.029	0.445	0.000	0.005
NM_015878	0	1	-1	62.8	116.4	173.3	171.4	195.7	132.9	0.353	0.341	0.095	0.809	0.010	0.015	0.854
NM_006565	0	1	-1	110.7	133.4	219.5	259.1	240.8	130.1	0.569	0.002	0.001	0.047	0.034	0.354	0.005
NM_024844	0	1	-1	80.1	81.8	193.6	200.2	203.0	122.9	0.363	0.023	0.973	0.216	0.366	0.026	0.110
NM_004147	0	1	-1	284.7	288.7	405.7	401.9	401.9	117.5	0.043	0.027	0.001	0.355	0.111	0.039	0.000
NM_016001	0	1	-1	57.6	102.1	138.6	177.7	166.4	108.8	0.022	0.116	0.013	0.046	0.019	0.174	0.099
NM_003776	0	1	-1	104.9	114.9	252.3	222.1	201.7	96.8	0.002	0.544	0.238	0.911	0.770	0.784	0.168
NM_002296	0	1	-1	137.4	197.8	193.0	302.1	233.5	96.1	0.166	0.215	0.358	0.970	0.193	0.194	0.804
NM_004688	0	1	-1	55.3	97.6	130.6	171.3	148.6	93.3	0.069	0.116	0.463	0.755	0.116	0.151	0.721
NM_004894	0	1	-1	118.3	132.1	194.2	243.2	209.9	91.6	0.961	0.000	0.000	0.015	0.013	0.835	0.000
NM_001316	0	1	-1	93.4	150.9	137.9	185.3	178.4	84.9	0.178	0.174	0.000	0.644	0.038	0.000	0.007
NM_024629	0	1	-1	43.2	52.9	98.3	128.7	128.1	48.9	0.067	0.602	0.797	0.005	0.025	0.529	0.735
NM_004526	0	1	-1	139.3	169.0	166.5	250.8	222.2	82.9	0.310	0.010	0.005	0.032	0.015	0.272	0.012
NM_019005	0	1	-1	102.5	127.1	167.6	186.8	184.8	82.4	0.022	0.000	0.000	0.080	0.052	0.801	0.001
NM_018230	0	1	-1	115.7	159.0	173.7	184.4	191.7	76.0	0.108	0.112	0.023	0.018	0.703	0.000	0.628
NM_007358	0	1	-1	107.5	132.5	167.7	181.8	182.4	74.8	0.140	0.025	0.015	0.029	0.024	0.606	0.114
NM_016395	0	1	-1	93.3	87.8	146.8	130.2	165.3	72.0	0.837	0.004	0.001	0.005	0.002	0.973	0.000
NM_019005	0	1	-1	109.4	135.8	169.4	179.4	179.3	69.9	0.579	0.000	0.432	0.001	0.492	0.150	0.984
NM_019054	0	1	-1	146.7	188.1	166.8	211.9	215.9	69.2	0.418	0.001	0.012	0.014	0.076	0.447	0.000
NM_018307	0	1	-1	100.9	106.6	137.1	181.5	170.1	69.2	0.037	0.001	0.002	0.000	0.000	0.258	0.002
NM_002967	0	1	-1	148.8	117.0	232.4	220.9	211.5	62.7	0.168	0.001	0.001	0.000	0.000	0.247	0.000
NM_018120	0	1	-1	50.9	61.6	95.7	116.8	113.4	62.5	0.036	0.019	0.001	0.964	0.115	0.116	0.000
NM_007358	0	1	-1	73.2	122.6	134.4	128.0	134.5	61.3	0.372	0.000	0.426	0.116	0.499	0.001	0.453
NM_004146	0	1	-1	43.1	26.2	109.8	109.1	101.2	58.1	0.084	0.180	0.521	0.001	0.006	0.287	0.521
NM_001033	0	1	-1	72.7	72.5	106.8	113.2	120.3	47.6	0.057	0.001	0.005	0.000	0.000	0.959	0.004
NM_003707	0	1	-1	92.9	102.1	128.2	165.3	137.9	45.0	0.116	0.477	0.039	0.389	0.239	0.115	0.102
NM_005675	0	1	-1	122.2	82.4	170.1	171.7	163.8	41.7	0.737	0.952	0.015	0.777	0.067	0.018	0.082
NM_024056	0	1	-1	287.8	249.4	324.3	360.5	326.9	39.1	0.327	0.128	0.083	0.875	0.768	0.005	0.075
NM_017615	0	1	-1	43.8	58.1	80.3	83.4	82.1	38.3	0.644	0.130	0.000	0.499	0.009	0.000	0.004
NM_017917	0	1	-1	45.7	71.6	67.7	85.2	83.4	37.7	0.960	0.270	0.020	0.550	0.135	0.195	0.031
NM_001634	0	1	-1	60.5	88.9	68.4	99.1	93.4	32.9	0.404	0.343	0.114	0.737	0.821	0.310	0.162
NM_001634	0	1	-1	59.6	98.3	59.9	101.0	90.5	30.9	0.372	0.001	0.000	0.035	0.001	0.030	0.000
NM_003563	0	1	-1	85.1	67.6	93.9	114.9	114.7	29.5	0.310	0.050	0.104	0.000	0.001	0.517	0.142
NM_003171	0	1	-1	77.6	102.1	94.5	112.5	106.7	29.1	0.189	0.390	0.154	0.029	0.032	0.308	0.265
NM_017768	0	1	-1	36.8	45.5	51.6	68.0	64.3	27.4	0.037	0.067	0.018	0.785	0.094	0.150	0.001
NM_016103	0	1	-1	18.6	42.3	33.1	46.0	45.9	27.2	0.039	0.001	0.000	0.000	0.000	0.941	0.000
NM_003563	0	1	-1	152.5	150.4	152.7	179.0	179.6	27.1	0.612	0.001	0.000	0.001	0.001	0.317	0.000
NM_031209	0	1	-1	129.1	87.4	182.9	141.8	154.7	25.6	0.306	0.899	0.729	0.389	0.374	0.856	0.694
NM_003876	0	1	-1	158.9	151.3	183.9	203.2	182.7	23.8	0.243	0.071	0.009	0.212	0.019	0.143	0.002
NM_018147	0	1	-1	20.7	27.9	35.7	43.0	43.4	22.7	0.940	0.016	0.025	0.043	0.063	0.674	0.034
NM_003878	0	1	-1	35.0	49.4	38.8	69.1	57.1	22.2	0.832	0.014	0.003	0.064	0.026	0.413	0.012
NM_003201	0	1	-1	82.3	78.4	111.0	108.2	103.1	20.8	0.167	0.308	0.009	0.452	0.334	0.010	0.060
NM_014388	0	1	-1	57.2	74.2	74.5	74.8	76.9	17.7	0.891	0.000	0.000	0.048	0.070	0.705	0.000
NM_014388	0	1	-1	75.7	86.0	109.9	92.7	95.2	19.5	0.328	0.002	0.000	0.011	0.000	0.006	0.000
NM_003201	0	1	-1	40.1	30.7	59.8	60.5	59.1	19.0	0.807	0.003	0.000	0.058	0.028	0.314	0.003
NM_002914	0	1	-1	53.3	57.1	74.2	63.7	72.1	18.8	0.451	0.006	0.000	0.001	0.000	0.160	0.002
NM_016359	0	1	-1	48.0	56.4	53.7	67.3	64.8	16.8	0.281	0.000	0.000	0.000	0.000	0.586	0.001
NM_017865	0	1	-1	182.1	142.1	275.1	193.2	198.6	16.4	0.222	0.146	0.749	0.054	0.192	0.474	0.576
NM_020662	0	1	-1	12.4	13.9	24.6	32.5	28.8	16.4	0.005	0.001	0.009	0.000	0.000	0.825	0.004
NM_002967	0	1	-1	22.2	17.6	38.5	45.8	45.1	16.0	0.511	0.005	0.003	0.002	0.002	0.762	0.008
NM_002691	0	1	-1	49.7	50.3	65.4	69.9	64.7	15.1	0.674	0.003	0.002	0.003	0.001	0.475	0.005
NM_001809	0	1	-1	30.6	44.3	32.7	62.1	44.4	13.8	0.351	0.001	0.010	0.047	0.166	0.229	0.005
NM_001277	0	1	-1	80.5	89.1	85.1	78.3	92.1	11.5	0.441	0.003	0.016	0.082	0.208	0.420	0.007
NM_018133	0	1	-1	40.8	42.4	40.6	57.3	51.7	10.9	0.385	0.012	0.007	0.009	0.007	0.590	0.010
NM_018492	0	1	-1	18.4	20.2	24.2	33.8	29.1	10.6	0.047	0.001	0.001	0.084	0.095	0.821	0.000
NM_003258	0	1	-1	86.3	79.6	79.5	117.7	95.9	9.7	0.723	0.086	0.018	0.121	0.026	0.167	0.048
NM_018944	0	1	-1	75.4	68.8	79.8	83.6	84.3	9.0	0.843	0.132	0.657	0.110	0.726	0.295	0.883
NM_024631	0	1	-1	37.5	36.3	49.5	41.8	45.1	7.6	0.232	0.000	0.330	0.012	0.599	0.085	0.854
NM_017615	0	1	-1	119.2	100.0	124.4	113.1	126.6	7.3	0.129	0.592	0.519	0.086			