

## Appendix 1

Differentially expressed genes between 2C-like cells and 2i cells

Gene Name	level in 2i cells	level in 2C-like	log2FoldChange	adj p-val
Prss23	0.00	6128.94	Inf	7.14E-05
Hs6st2	0.03	6241.06	17.84	5.64E-04
Gm8723	0.02	127.88	12.95	2.14E-06
Zfp352	0.12	604.95	12.36	2.91E-03
Trim75	0.04	123.58	11.71	4.31E-08
AC133095.2	0.05	141.36	11.53	3.94E-04
Pramef25	0.50	852.11	10.73	1.75E-03
Zscan4e	0.12	202.23	10.68	4.99E-07
AC168977.1	0.09	141.18	10.67	5.44E-06
Trim43a	7.82	12486.60	10.64	3.77E-02
Gm11487	0.08	110.78	10.45	3.29E-05
Drr1	0.05	73.34	10.42	2.79E-04
Gm8711	0.18	246.11	10.42	4.11E-06
Olfr881	0.10	126.97	10.38	5.18E-03
Fosl2	0.18	239.84	10.35	4.38E-02
B020004J07Rik	0.08	96.94	10.30	1.85E-05
Gm6803	0.69	808.99	10.20	3.72E-04
Zscan4b	0.31	352.71	10.16	3.21E-05
BC147527	0.17	194.73	10.15	4.60E-03
Usp17lc	0.62	636.01	10.01	3.90E-17
AA623943	0.22	212.87	9.95	1.03E-10
Usp17lb	0.59	578.63	9.94	1.12E-02
Cacna1s	0.34	322.82	9.89	4.78E-03
Gm13078	0.16	151.30	9.85	1.35E-07
Usp17ld	0.17	156.01	9.81	9.27E-08
Gm11544	0.16	138.47	9.73	6.65E-07
Gm2016	1.60	1289.77	9.66	5.67E-09
Zscan4f	0.78	580.98	9.55	8.67E-08
Gm11543	0.33	233.34	9.48	1.02E-10
Gm6489	0.61	406.24	9.38	6.98E-06
Gm20767	0.32	208.93	9.37	1.73E-09
Gm5698	1.02	671.58	9.36	7.46E-05
Gm5662	4.52	2858.87	9.31	8.43E-09
Gm21936	0.66	396.86	9.24	1.37E-11
Gm8300	2.00	1202.68	9.23	1.30E-10
BC080695	0.84	493.98	9.20	3.91E-04
Gm2075	0.23	130.08	9.14	6.20E-06
Tmem92	0.37	197.25	9.06	1.70E-08
Gm21319	0.48	250.83	9.04	9.81E-08
Abcb5	0.70	356.64	8.99	2.27E-03

Gm2022	1.29	643.76	8.97	5.37E-06
Gm21761	0.83	406.64	8.93	1.55E-04
Gm11546	0.42	199.64	8.91	2.39E-08
Usp17la	0.51	238.08	8.87	7.71E-06
Zscan4d	3.36	1526.44	8.83	3.43E-04
Gm2035	0.51	223.04	8.76	4.39E-09
Gm12794	0.36	155.01	8.75	1.70E-06
Gm2056	0.42	167.67	8.64	8.75E-07
Gm4027	0.76	252.95	8.38	9.38E-07
AF067061	0.89	281.40	8.31	3.86E-04
Gm8332	1.90	573.06	8.24	1.92E-06
Gm8994	3.30	868.95	8.04	4.81E-05
Zscan4c	8.59	2227.95	8.02	6.86E-05
BB287469	0.58	145.47	7.98	2.76E-05
Phf11a	1.10	246.67	7.81	3.05E-08
Gm5039	7.71	1446.34	7.55	8.38E-06
Calhm3	0.67	124.60	7.55	3.13E-04
Chit1	1.43	204.75	7.17	4.11E-06
AU019990	0.75	102.87	7.09	3.43E-03
B020031M17Rik	1.55	208.45	7.07	2.75E-03
Guca1a	2.66	349.99	7.04	8.32E-06
Gm5117	7.62	911.40	6.90	2.13E-02
Mdga2	0.53	61.89	6.86	4.43E-02
Gm16239	1.01	111.03	6.78	1.21E-02
Arg2	2.35	214.18	6.51	1.23E-03
Pdgfrl	5.11	414.93	6.34	1.74E-03
Scd3	7.00	518.04	6.21	6.29E-08
Gm16892	5.43	395.12	6.19	2.52E-02
Gm10800	259.06	16352.73	5.98	8.87E-03
Pdlim3	2.27	138.71	5.93	5.59E-03
Aqp9	2.75	158.22	5.85	1.38E-03
Limch1	6.50	350.07	5.75	8.10E-03
Tmem132c	7.29	383.23	5.72	1.38E-04
Ccser1	5.90	308.61	5.71	2.07E-06
Zfp560	8.21	426.55	5.70	4.47E-05
Arhgef26	27.17	1407.23	5.69	9.65E-06
Gm21738	28.03	1392.64	5.63	9.25E-07
Ctf2	4.97	242.04	5.61	1.49E-02
Antxr1	4.93	238.82	5.60	3.94E-04
Sh3kbp1	6.22	285.56	5.52	1.20E-04
Gm10717	8.16	354.69	5.44	8.16E-06
Gm26870	9.89	426.04	5.43	1.74E-06
Neto2	9.63	383.95	5.32	3.41E-03
Gm11168	5.76	228.28	5.31	1.95E-04
P4ha2	12.86	447.34	5.12	1.68E-05
Gm10722	6.76	224.68	5.06	3.94E-04

Gm5435	9.34	290.93	4.96	6.03E-03
Slc35e3	18.07	466.91	4.69	1.68E-05
Scamp1	46.94	1210.95	4.69	1.32E-05
Gm10801	10.75	272.71	4.66	1.82E-04
ENSMUSG00000060393	40.54	961.84	4.57	6.87E-04
Uap1	87.02	2044.20	4.55	2.42E-09
Gm13228	51.98	1180.16	4.50	8.95E-06
Gm12183	125.60	2688.09	4.42	7.46E-05
Mcm9	28.57	601.03	4.39	1.97E-05
Dennd4c	75.34	1559.44	4.37	2.50E-07
Gm13226	8.36	165.86	4.31	1.31E-02
Dhtkd1	105.29	1980.85	4.23	2.71E-13
Ercc4	163.70	3021.31	4.21	4.08E-12
Fbxo15	1568.23	28808.76	4.20	9.66E-04
2010315B03Rik	7.80	129.72	4.06	4.75E-02
Prex2	79.38	1240.22	3.97	4.11E-06
Lgals4	18.93	291.06	3.94	5.59E-03
Ric3	27.27	417.63	3.94	3.90E-02
Cwc22	279.65	4100.02	3.87	1.39E-06
Nelfa	270.81	3944.80	3.86	2.52E-08
Tanc2	17.52	249.84	3.83	2.60E-03
Arsk	45.17	606.24	3.75	3.47E-04
Gm13622	56.13	685.20	3.61	7.30E-08
Fam234b	19.02	215.15	3.50	2.23E-02
Pemt	15.81	167.33	3.40	4.38E-02
Tbc1d23	126.18	1331.81	3.40	3.60E-07
Dnajb14	70.39	728.76	3.37	2.68E-06
Dcbld1	113.27	1159.11	3.36	1.27E-07
Glrx2	95.46	973.31	3.35	2.96E-07
1700025G04Rik	22.56	216.97	3.27	3.43E-02
Fundc1	121.03	1130.11	3.22	2.11E-04
Mbd5	20.93	187.38	3.16	4.14E-02
Ppm1a	295.98	2641.47	3.16	3.74E-06
Rxra	22.71	197.87	3.12	3.47E-02
Tsen2	155.44	1305.13	3.07	2.07E-05
Bola1	106.12	865.28	3.03	4.82E-08
Cab39	222.01	1792.52	3.01	9.25E-07
Aqr	389.52	3137.48	3.01	1.03E-10
ENSMUSG00000095908	25.76	207.48	3.01	3.60E-02
Zfp809	148.32	1177.65	2.99	6.46E-07
Sdhaf3	48.71	375.25	2.95	1.83E-03
Zfp386	108.69	818.30	2.91	1.40E-02
Bud13	162.42	1159.31	2.84	3.01E-03
Cbl	120.50	850.29	2.82	1.68E-04
Robo1	53.08	372.62	2.81	2.35E-03
Dst	954.49	6429.51	2.75	4.78E-11

Ddit4l	43.07	290.03	2.75	1.31E-02
Trak2	53.03	353.68	2.74	3.95E-03
Rad51b	39.28	258.42	2.72	2.49E-02
Ncoa2	169.25	1089.28	2.69	2.07E-05
Micu1	87.51	542.30	2.63	1.35E-03
Sgms1	209.59	1294.63	2.63	1.75E-05
Cldn12	38.47	236.50	2.62	4.43E-02
Pcnxl4	86.69	528.92	2.61	2.28E-04
C1d	401.64	2395.59	2.58	1.25E-15
Sord	70.63	411.05	2.54	4.38E-02
Coil	676.12	3894.99	2.53	6.49E-04
Lonp2	264.29	1449.56	2.46	4.99E-07
Cand1	482.56	2589.46	2.42	1.92E-06
Zfp119b	69.33	354.82	2.36	3.47E-02
Dock9	89.90	451.82	2.33	1.51E-02
2210409E12Rik	111.38	551.79	2.31	6.00E-04
Slc7a6os	66.22	309.70	2.23	3.18E-02
Neo1	204.73	948.54	2.21	1.47E-03
Gbp11l	263.67	1213.79	2.20	2.94E-07
Arid4a	335.22	1519.45	2.18	1.67E-03
Katnbl1	137.05	618.46	2.17	5.99E-04
Daam1	87.49	394.77	2.17	1.72E-02
Clp1	416.47	1832.57	2.14	4.26E-07
Pcca	88.10	376.89	2.10	2.77E-02
Zfp217	101.08	422.16	2.06	1.62E-02
Ticrr	563.52	2344.40	2.06	5.52E-03
Prkaa1	126.09	520.29	2.04	3.90E-02
Ppig	838.86	3376.17	2.01	3.91E-10
Bach1	118.92	476.26	2.00	2.10E-02
Rimklb	266.03	1060.79	2.00	2.47E-03
2810004N23Rik	278.95	1070.40	1.94	1.83E-05
Rbbp6	542.32	2067.94	1.93	6.81E-06
Cep57l1	240.55	912.16	1.92	8.91E-04
Akap13	151.29	570.55	1.92	1.88E-02
Diaph3	132.83	500.59	1.91	9.78E-03
Utp23	100.59	378.44	1.91	3.39E-02
Rbm25	3500.92	13085.13	1.90	8.77E-21
Zfp936	329.76	1212.27	1.88	1.24E-03
Zfp516	129.93	472.93	1.86	1.58E-02
Spdl1	184.49	661.98	1.84	2.58E-02
Snapc3	183.73	646.81	1.82	3.14E-03
Arnt	134.08	459.71	1.78	4.14E-02
Ctr9	297.36	994.12	1.74	5.99E-04
Iars	1470.43	4875.66	1.73	4.66E-06
Wdr70	128.85	424.10	1.72	4.73E-02
Ppp1r8	141.75	462.93	1.71	3.14E-02

Pnkd	150.27	482.14	1.68	3.23E-02
Rlf	186.31	587.43	1.66	4.22E-02
PISD	297.47	928.34	1.64	6.03E-03
Gtf3c3	207.22	631.64	1.61	2.99E-02
Nup205	303.52	909.53	1.58	1.11E-02
Atf2	466.39	1396.44	1.58	1.49E-03
Mreg	442.39	1314.81	1.57	1.40E-03
Snw1	728.61	2143.80	1.56	9.68E-07
Dppa2	226.50	653.99	1.53	1.53E-02
Scfd1	445.51	1249.17	1.49	2.13E-02
Pnp	238.15	663.44	1.48	1.64E-02
Zcchc17	218.56	607.37	1.47	2.95E-02
Klf3	227.96	631.80	1.47	2.44E-02
Cstf2t	206.47	562.88	1.45	4.65E-02
Avpi1	386.02	1051.98	1.45	1.83E-03
D230025D16Rik	817.24	2225.67	1.45	7.30E-03
Papolg	293.78	794.44	1.44	3.07E-02
Gtf2b	330.34	888.38	1.43	1.10E-02
Ube2t	332.01	874.54	1.40	8.00E-03
Genpe	755.01	1912.56	1.34	5.59E-03
Srsf5	1046.68	2626.62	1.33	4.64E-06
Haus3	298.99	746.25	1.32	2.52E-02
Mtf2	2331.48	5765.01	1.31	2.64E-05
Gm26917	1840.84	4499.22	1.29	1.74E-03
Fnip1	265.62	649.11	1.29	4.96E-02
Klf9	384.58	939.18	1.29	1.47E-02
Gtf2h2	346.67	817.05	1.24	4.60E-02
Arih2	559.83	1286.21	1.20	4.96E-02
Wtap	475.66	1090.61	1.20	1.21E-02
Utp3	498.47	1112.17	1.16	1.40E-02
Agpat5	374.00	828.45	1.15	4.89E-02
Ccnf	998.52	2192.06	1.13	3.17E-02
Map1b	1111.65	2405.68	1.11	2.13E-02
Hmmr	732.19	1569.15	1.10	4.43E-02
Luc7l3	661.04	1368.42	1.05	2.13E-02
Btg1	560.61	1152.38	1.04	2.99E-02
Arid1a	641.25	1315.52	1.04	1.79E-02
Triml2	780.84	1592.99	1.03	2.49E-02
Rsrc2	751.37	1507.71	1.00	1.49E-02
Tacc3	1049.95	2065.64	0.98	3.47E-02
Cirh1a	1481.08	2902.23	0.97	3.01E-03
Thoc2	1023.75	2002.21	0.97	1.72E-02
Rplp0	6898.18	13421.12	0.96	1.63E-06
Nmd3	1249.74	2373.43	0.93	4.56E-02
Gm9625	966.08	1795.59	0.89	2.52E-02
Rif1	3165.71	5854.94	0.89	2.33E-04

Trim28	1715.70	3149.49	0.88	3.76E-03
Cul5	1347.83	2468.83	0.87	3.80E-02
Gm8730	1718.89	3105.61	0.85	5.97E-03
Kif20b	1161.66	2092.99	0.85	2.39E-02
2810474019Rik	1902.65	3419.75	0.85	3.04E-02
Dnttip2	1088.83	1905.36	0.81	4.38E-02
Smc4	1211.35	2116.97	0.81	3.47E-02
mt-Rnr1	3179.73	5483.37	0.79	7.63E-03
Gnl3	1392.54	2380.12	0.77	3.96E-02
Eif4a2	4343.62	6859.50	0.66	2.44E-02
Sept2	8965.87	5590.07	-0.68	2.64E-02
Nedd4	3371.49	1973.56	-0.77	3.20E-02
Actr2	2977.84	1705.15	-0.80	3.29E-02
Paics	5388.05	3083.72	-0.81	9.27E-03
Srpkl	1870.29	1017.49	-0.88	4.38E-02
Myl12b	1241.76	614.64	-1.01	3.77E-02
Ywhag	895.49	410.67	-1.12	4.92E-02
Vdac1	2577.24	1113.31	-1.21	1.91E-04
Aamp	1004.15	417.62	-1.27	1.03E-02
Gdf3	1260.90	502.62	-1.33	1.36E-02
Stmn2	835.90	330.22	-1.34	1.94E-02
Acadm	1281.21	499.48	-1.36	1.49E-02
Apobec3	597.04	222.42	-1.42	4.52E-02
Chchd4	735.24	270.24	-1.44	1.50E-02
Gm11223	660.76	231.30	-1.51	1.10E-02
ldh2	1344.63	454.15	-1.57	1.11E-02
Tpd52	888.19	292.62	-1.60	1.02E-03
Hmces	520.32	170.75	-1.61	1.79E-02
Slc25a13	562.12	178.44	-1.66	1.21E-02
Dsg2	729.58	216.19	-1.75	2.62E-02
Lypla1	1653.09	468.62	-1.82	2.18E-05
Tmem245	479.67	132.27	-1.86	1.60E-02
Acaa2	342.44	90.92	-1.91	3.30E-02
Bcat2	382.21	94.23	-2.02	9.21E-03
Prpf6	535.01	131.76	-2.02	2.02E-02
Anxa4	472.15	107.85	-2.13	4.19E-03
H2-M6-ps	299.53	58.93	-2.35	8.45E-03
Rc3h1	199.94	35.67	-2.49	4.65E-02
Ccdc141	329.71	56.21	-2.55	4.51E-02
Bscl2	206.23	31.46	-2.71	4.48E-02
Laptm5	329.97	50.12	-2.72	1.36E-02
Zfp157	265.47	36.49	-2.86	2.49E-02
Plagl1	338.73	44.95	-2.91	3.23E-03
Prkd3	195.26	25.41	-2.94	1.17E-02
Armxc1	133.54	15.61	-3.10	4.96E-02
Lefty2	425.10	47.77	-3.15	4.38E-02

Zfp553	152.65	16.37	-3.22	2.13E-02
Ddx58	201.28	20.34	-3.31	2.44E-02
Ormdl1	172.51	16.43	-3.39	2.13E-02
Gatsl3	346.06	31.75	-3.45	2.82E-04
Sulf1	151.42	12.59	-3.59	2.13E-02
Crtap	110.35	8.96	-3.62	4.38E-02
Fetub	143.64	10.85	-3.73	8.11E-03
Rhpn2	127.34	8.05	-3.98	2.33E-02
Msantd3	123.04	7.19	-4.10	9.27E-03
Angptl4	134.41	3.24	-5.37	2.50E-02
Ccdc136	63.27	1.43	-5.47	4.65E-02
Fhl1	108.58	1.82	-5.90	1.21E-02
Kdm4a	57.22	0.94	-5.93	4.95E-02
Dtx1	77.76	0.83	-6.55	2.32E-02
Rnf41	72.57	0.75	-6.60	5.79E-03
Zfp36l2	78.67	0.74	-6.73	2.60E-03
Ackr3	83.98	0.65	-7.00	1.38E-02
Senp8	64.34	0.38	-7.40	6.08E-03
2900011008Rik	128.86	0.38	-8.41	1.63E-06
Tmem14a	44.27	0.10	-8.84	2.94E-02
Slc52a3	84.05	0.00	-Inf	2.06E-04
Qpctl	46.74	0.00	-Inf	1.50E-02
Myliip	54.75	0.00	-Inf	2.38E-03
March2	43.88	0.00	-Inf	1.49E-02