

**Table S1.** Primers for RT-PCR and quantitative PCR

Gene name	Forward/Reverse primer	Usage
<i>OCT4</i>	Bt03223846_g1/TaqMan code	qPCR
<i>SOX2</i>	Bt03278318_s1/TaqMan code	qPCR
<i>NANOG</i>	Bt03220541_m1/TaqMan code	qPCR
<i>OCT4</i>	F-GCT GAA TAC CTT CCC AAA TAG AA R-GGG TGG ACC ATC CTC TAG ACT G	Genotyping
<i>SOX2</i>	F-CCT AGA ACC TCG CTG GAA AGG A R-GGT TCT CCT GGG CCA TCT TG	Genotyping
<i>KLF4</i>	F-CGG GGG TGG ACC ATC CTC TA R-GCG GTT ATT CGG GGC ACC T	Genotyping
<i>C-MYC</i>	F-TAA TTA AGG ATC CCA GTG TGG TG R-CTT CTT GTT CTT CTT CAG AGT CG	Genotyping
<i>GAPDH</i>	F-CGT GCG TGA CAT CAA AGA GAA GC R-ATC TGC TGG AAG GTG GAC AGT GAG	qPCR

**Table S2.** Up-regulated genes RNA-seq data (related to Fig. 4A)

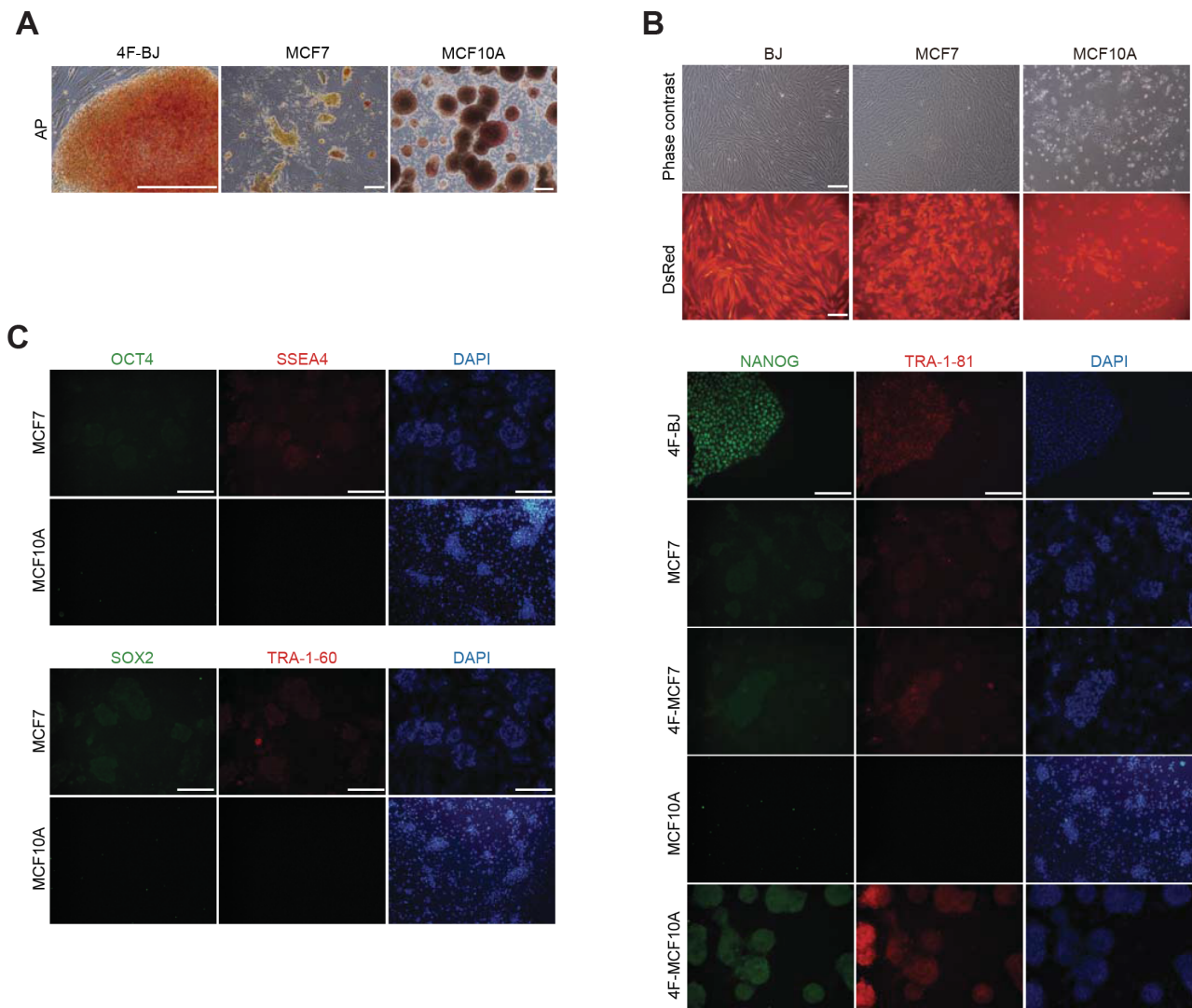
Gene	BJ_D0	BJ_D5	MCF10A_D0	MCF10A_D5	MCF7_D0	MCF7_D5
<i>PAX6</i>	0.0269494	0.0113521	0.224172	0.171387	0.0856153	0.030459
<i>MAX</i>	22.1466	30.8244	32.6585	20.8099	39.1586	23.0966
<i>POU2F1</i>	0.923403	1.56265	2.32409	3.16078	2.31367	2.95339
<i>IMPA1</i>	7.73532	5.42049	14.6321	10.762	4.49247	3.54719
<i>LDLR</i>	27.1271	45.004	32.3677	54.1633	11.7048	61.734
<i>TRPV5</i>	0	0	0	0	0	0
<i>PRMT6</i>	7.82135	13.6777	12.7025	15.1329	58.0293	56.0863
<i>GUCY2D</i>	0.0262609	0	0.0415165	0	0.083346	0.0988726
<i>FOXD3</i>	0	0	0	0	0.535299	0.362755
<i>SPINK7</i>	0	0	0	0	0	0
<i>FURIN</i>	45.4068	40.5965	23.1023	22.4803	13.1863	51.2839
<i>KLF6</i>	37.1727	23.0245	52.7709	22.6417	6.31637	5.52016
<i>TRPV6</i>	0	0.0280012	0.131241	0.0843574	7.96059	1.05057
<i>CYP3A43</i>	0	0	0	0	0	0
<i>GUCA1C</i>	0	0	0.0979714	0	0	0
<i>GUCA1B</i>	0.652254	0.806102	0.102972	0.0735789	0.689879	0.916379
<i>STAU1</i>	53.2082	53.7246	62.4591	55.1176	71.9446	82.6784
<i>MXD1</i>	1.99018	2.88011	8.2284	3.66749	5.13271	5.96059
<i>TRAF3</i>	7.94084	7.45504	7.11964	7.17479	3.83564	4.52804
<i>GZMB</i>	0	0	0	0	0	0

BJ D0: BJ day 0, BJ D5: BJ day 5, MCF10A D0: MCF10A day 0, MCF10A D5: MCF10A day 5, MCF7 D0: MCF7 day 0, MCF7 D5: MCF7 day 5.

**Table S3.** Down-regulated genes RNA-seq data (related to Fig. 4B)

Gene	BJ_D0	BJ_D5	MCF10A_D0	MCF10A_D5	MCF7_D0	MCF7_D5
<i>C15orf41</i>	9.23384	5.637	5.17871	4.81895	2.51524	1.92333
<i>APEH</i>	42.3743	52.4256	49.1372	41.604	22.9604	49.7696
<i>PAX6</i>	0.0269494	0.0113521	0.224172	0.171387	0.0856153	0.030459
<i>FOXD3</i>	0	0	0	0	0.535299	0.362755
<i>EIF4EBP2</i>	15.6903	21.6231	9.49912	19.9371	18.5559	22.5315
<i>DOT1L</i>	7.81793	5.68081	5.01814	5.65405	8.06546	6.23503
<i>EZH2</i>	14.0391	9.67931	29.3226	20.4293	58.3466	40.0806
<i>CHEK2</i>	7.3064	8.93179	12.9614	11.181	24.7948	18.0895
<i>POU2F1</i>	0.923403	1.56265	2.32409	3.16078	2.31367	2.95339
<i>EMX2</i>	0.43369	0.112463	0	0	0	0
<i>ADAR</i>	61.4891	104.917	73.1349	91.3031	81.6973	280.75
<i>CCNE1</i>	5.92887	6.47211	3.17218	7.10802	3.80302	11.2892
<i>PRIM2</i>	24.9882	13.2603	11.2276	10.7536	10.1855	15.1305
<i>MAX</i>	22.1466	30.8244	32.6585	20.8099	39.1586	23.0966
<i>POLD3</i>	6.39484	5.17455	11.241	13.8778	9.0307	8.86008
<i>TAL1</i>	0	0	0	0.0475226	0	0
<i>POLA2</i>	15.7678	9.25793	13.0434	14.78	13.073	14.6354
<i>POLD1</i>	10.6866	9.84303	16.5005	15.8301	20.5196	21.0289
<i>RFC1</i>	19.3214	15.3512	31.6793	25.5727	19.2162	25.0114
<i>KLF6</i>	37.1727	23.0245	52.7709	22.6417	6.31637	5.52016

BJ D0: BJ day 0, BJ D5: BJ day 5, MCF10A D0: MCF10A day 0, MCF10A D5: MCF10A day 5, MCF7 D0: MCF7 day 0, MCF7 D5: MCF7 day 5.



**Fig. S1.** Characterization of iPSCs derived from BJ and cancer cells. (A) AP-positive staining in BJ-iPSCs, 4F-MCF7, and 4F-MCF10A. Scale bars: 100  $\mu$ m. (B) DsRed was expressed in 80%~90% of BJ, MCF7, and MCF10A on day 2 after transfection. Scale bars: 100  $\mu$ m. (C) Immunofluorescence microscopy images of pluripotency markers (OCT4, SOX2, SSEA4, TRA-1-60, NANOG, and TRA-1-81) in MCF7, MCF10A, BJ-iPSCs, 4F-MCF10A, and 4F-MCF7. Scale bars: 100  $\mu$ m.