

**Table S4. Raw data for Fig. 3C showing the average expression change by *Ring1A/B* -dKO of derepressed or repressed genes by *Oct3/4*-KO that have more than a certain value of maximum fold enrichment determined by *Ring1B*-ChIP**

<b>Among total genes</b>				
Fold enrichment ( <i>Ring1B</i> -ChIP)	Number of genes	Average fold change by <i>Ring1A/B</i> -dKO ( $\log_{10}$ )	SD ( $\log_{10}$ )	
0 (0-1)	4591	0.009	0.226	
1 (1-2)	4552	0.010	0.226	
2 (2-3)	4280	0.011	0.227	
3 (3-4)	3697	0.016	0.232	
4 (4-5)	2901	0.025	0.240	
5 (5-6)	2191	0.031	0.242	
6 (6-7)	1627	0.040	0.254	
7 (7-8)	1198	0.051	0.263	
8 (8-9)	856	0.061	0.285	
9 (9-10)	650	0.070	0.296	
10 (10-11)	454	0.101	0.316	
11 (11-12)	352	0.138	0.334	
12 (12-13)	294	0.149	0.354	
13 (13-14)	233	0.174	0.376	
14 (14-15)	188	0.182	0.376	
15 (15-16)	148	0.215	0.384	
16 (16-17)	122	0.201	0.380	
17 (17-18)	99	0.186	0.351	
18 (18-19)	82	0.218	0.360	
19 (19-20)	71	0.242	0.369	
20 (20-)	61	0.238	0.386	
<b>Among derepressed genes by <i>Oct3/4</i>-KO</b>				
Fold enrichment ( <i>Ring1B</i> -ChIP)	Number of genes	Average fold change by <i>Ring1A/B</i> -dKO ( $\log_{10}$ )	SD ( $\log_{10}$ )	<i>P</i> value of <i>t</i> -test against total
0 (0-1)	129	0.247	0.375	1.23E-39
1 (1-2)	128	0.251	0.375	7.87E-40
2 (2-3)	125	0.254	0.376	6.31E-39
3 (3-4)	115	0.263	0.375	4.98E-37
4 (4-5)	92	0.283	0.391	1.15E-28
5 (5-6)	73	0.287	0.370	1.89E-25
6 (6-7)	59	0.299	0.388	3.65E-19
7 (7-8)	46	0.332	0.412	1.27E-14
8 (8-9)	36	0.384	0.428	1.90E-12
9 (9-10)	31	0.424	0.432	1.15E-11
10 (10-11)	24	0.485	0.453	3.49E-09
11 (11-12)	24	0.485	0.453	2.17E-08
12 (12-13)	21	0.490	0.480	1.28E-06
13 (13-14)	18	0.581	0.457	1.77E-07
14 (14-15)	13	0.632	0.380	4.20E-08
15 (15-16)	12	0.607	0.385	8.42E-07
16 (16-17)	10	0.556	0.335	9.11E-07
17 (17-18)	9	0.535	0.347	1.07E-05
18 (18-19)	8	0.570	0.352	4.13E-05
19 (19-20)	8	0.570	0.352	5.93E-05
20 (20+)	6	0.634	0.294	7.08E-06

Among repressed genes by <i>Oct3/4</i> -KO				
Fold enrichment (Ring1B-ChIP)	Number of genes	Average fold change by <i>Ring1A/B</i> -dKO ( $\log_{10}$ )	SD ( $\log_{10}$ )	<i>P</i> value of t-test against total
0 (0-1)	224	-0.119	0.331	7.83E-44
1 (1-2)	221	-0.115	0.330	3.17E-42
2 (2-3)	214	-0.116	0.334	1.30E-40
3 (3-4)	188	-0.111	0.342	1.47E-33
4 (4-5)	155	-0.081	0.344	2.30E-21
5 (5-6)	129	-0.066	0.363	9.44E-14
6 (6-7)	102	-0.034	0.352	3.79E-08
7 (7-8)	82	-0.024	0.374	7.59E-06
8 (8-9)	65	-0.041	0.388	9.19E-07
9 (9-10)	48	-0.035	0.390	1.74E-05
10 (10-11)	33	0.047	0.383	4.74E-02
11 (11-12)	26	0.101	0.397	2.45E-01
12 (12-13)	21	0.083	0.429	1.23E-01
13 (13-14)	15	0.113	0.466	3.03E-01
14 (14-15)	13	0.152	0.478	6.47E-01
15 (15-16)	9	0.236	0.474	7.92E-01
16 (16-17)	8	0.214	0.498	8.88E-01
17 (17-18)	6	0.042	0.324	1.88E-02
18 (18-19)	6	0.042	0.324	7.55E-03
19 (19-20)	4	0.128	0.244	2.03E-02
20 (20+)	3	0.060	0.247	1.69E-02