

**Table S1.** CG and non-CG methylation profiles in 15 ICRs

ICR	Chr.	Start*	End	GVO		Dnmt3a-KO		Dnmt3L-KO		NGO		
				CG methylation (%)	Non-CG methylation (%)	CG methylation (%)	Non-CG methylation (%)	CG methylation (%)	Non-CG methylation (%)	CG methylation (%)	Non-CG methylation (%)	
Maternally methylated ICRs												
<i>Nespas-Gnasx1</i>	2	174,119,863	174,126,564	95.8	5.8	9.0	0.8	6.3	0.6	3.1	1.0	
<i>Gnas1A</i>	2	174,150,877	174,154,638	91.7	4.5	5.5	1.0	0.5	0.6	0.7	0.7	
<i>Peg10</i>	6	4,696,743	4,699,483	93.8	4.9	22.9	0.2	20.7	0.7	19.3	0.4	
<i>Mest</i>	6	30,684,932	30,689,966	93.4	3.8	17.4	0.8	11.5	0.3	9.2	0.9	
<i>Peg3</i>	7	6,679,787	6,684,257	96.6	6.5	19.2	1.1	18.3	0.4	5.5	0.7	
<i>Snrpn</i>	7	67,147,381	67,151,583	95.9	7.5	21.5	0.8	12.1	0.2	9.6	0.5	
<i>Kcnq1ot1</i>	7	150,480,736	150,482,810	97.8	8.1	4.6	1.1	4.3	0.3	2.6	0.5	
<i>Zac1</i>	10	12,809,697	12,812,131	97.0	4.7	6.0	0.6	3.3	0.4	0.6	0.5	
<i>Grb10</i>	11	11,925,127	11,927,100	95.7	7.7	11.9	0.6	9.4	0.3	4.5	0.7	
<i>U2af1-rs1</i>	11	22,871,610	22,874,212	90.0	7.2	15.5	1.4	6.4	0.3	4.8	0.6	
<i>Igf2r</i>	17	12,934,169	12,935,816	97.4	7.6	11.9	1.1	1.4	0.6	0.8	0.4	
<i>Impact</i>	18	13,130,435	13,133,510	97.1	6.1	7.8	0.6	14.0	0.3	16.5	0.3	
Paternally methylated ICRs												
<i>H19</i>	7	149,764,673	149,771,930	1.0	0.5	2.4	0.4	1.5	0.3	1.1	0.6	
<i>Rasgrf1</i>	9	89,767,090	89,775,128	4.7	0.6	1.7	0.4	1.4	0.3	1.5	0.4	
<i>Dlk1-Gtl2</i>	12	110,762,703	110,773,093	4.4	0.4	5.2	0.4	5.5	0.5	0.9	0.6	

\* The genomic coordinates (mm9) of the 15 ICRs were extracted from our previous report. (Tomizawa *et al.*, 2011)