

Table S4. Gene methylation profiling in the livers of *wild-type*, *PML^{-/-}*, *HBsAg^{tg/tg}* and *PML^{-/-}HBsAg^{tg/tg}* mice with normal histology, dysplasia, or HCC development.

Gene	UMet: un-methylation percentage; Met: methylation percentage.													
	335 (<i>wild-type</i> , 10-mon, M)		116 (<i>PML^{-/-}HBsAg^{tg/tg}</i> , 12-mon, HCC, M)		BM-39 (<i>PML^{-/-}HBsAg^{tg/tg}</i> , 8-mon, dysplasia, M)		322 (<i>PML^{-/-}</i> , 10-mon, normal, M)		336 (<i>HBsAg^{tg/tg}</i> , 6-mon, normal, M)		424 (<i>wild-type</i> , 18-mon, normal, M)			
	UMet	Met	UMet	Met	UMet	Met	UMet	Met	UMet	Met	UMet	Met	UMet	Met
Acb1b	99.91%	0.09%	100.00%	0.00%	100.00%	0.00%	99.82%	0.18%	99.92%	0.08%	100.00%	0.00%	100.00%	0.00%
Aix3	98.99%	1.01%	99.04%	0.96%	99.82%	0.18%	98.94%	1.06%	99.55%	0.45%	99.66%	0.34%	99.66%	0.34%
Aix4	99.72%	0.28%	99.95%	0.05%	99.95%	0.05%	99.52%	0.48%	99.83%	0.17%	99.92%	0.08%	99.92%	0.08%
Apa1	99.92%	0.08%	100.00%	0.00%	100.00%	0.00%	100.00%	0.00%	100.00%	0.00%	100.00%	0.00%	100.00%	0.00%
Apa1a	99.81%	0.19%	99.96%	0.04%	99.98%	0.02%	99.60%	0.40%	99.87%	0.13%	100.00%	0.00%	100.00%	0.00%
B4galnt2	100.00%	0.00%	99.83%	0.17%	99.93%	0.07%	99.59%	0.41%	99.84%	0.16%	100.00%	0.00%	100.00%	0.00%
Bnip3	99.76%	0.24%	99.75%	0.25%	99.99%	0.01%	99.33%	0.67%	99.81%	0.19%	99.91%	0.09%	99.91%	0.09%
Bnip3l	100.00%	0.00%	99.92%	0.08%	100.00%	0.00%	100.00%	0.00%	100.00%	0.00%	100.00%	0.00%	100.00%	0.00%
Cacna1h	99.84%	0.16%	99.92%	0.08%	99.92%	0.08%	99.82%	0.18%	99.81%	0.19%	99.79%	0.21%	99.79%	0.21%
Cadm1	99.23%	0.77%	99.64%	0.36%	99.84%	0.16%	99.63%	0.37%	99.56%	0.44%	99.84%	0.16%	99.84%	0.16%
Casp3	99.23%	0.77%	99.67%	0.33%	99.73%	0.27%	99.30%	0.70%	99.29%	0.71%	99.94%	0.06%	99.94%	0.06%
Casp8	99.86%	0.14%	100.00%	0.00%	100.00%	0.00%	99.89%	0.11%	99.94%	0.06%	100.00%	0.00%	100.00%	0.00%
Ccnd2	99.78%	0.22%	99.48%	0.52%	99.69%	0.31%	99.47%	0.53%	99.86%	0.14%	99.91%	0.09%	99.91%	0.09%
Cdh1	99.74%	0.26%	99.67%	0.33%	99.95%	0.05%	99.39%	0.61%	99.67%	0.33%	100.00%	0.00%	100.00%	0.00%
Cdh13	93.71%	6.29%	89.08%	10.92%	96.12%	3.88%	95.70%	4.30%	96.72%	3.28%	96.79%	3.21%	96.79%	3.21%
Cdkn1a	99.86%	0.14%	100.00%	0.00%	99.92%	0.08%	99.69%	0.31%	99.73%	0.27%	99.93%	0.07%	99.93%	0.07%
Cdkn1b	100.00%	0.00%	99.92%	0.08%	100.00%	0.00%	100.00%	0.00%	99.89%	0.11%	99.95%	0.05%	99.95%	0.05%
Cdkn1c	97.30%	2.70%	43.77%	56.23%	45.65%	54.35%	44.01%	55.99%	95.06%	4.94%	97.52%	2.48%	97.52%	2.48%
Cdkn2a	99.50%	0.50%	99.65%	0.35%	99.36%	0.64%	99.71%	0.29%	99.32%	0.68%	99.63%	0.37%	99.63%	0.37%
Cdkn2b	99.28%	0.72%	99.79%	0.21%	99.30%	0.70%	99.15%	0.85%	99.44%	0.56%	99.62%	0.38%	99.62%	0.38%
Cdfr	99.57%	0.43%	99.60%	0.40%	99.64%	0.36%	98.93%	1.07%	98.84%	1.16%	99.13%	0.87%	99.13%	0.87%
Cttnb1	99.83%	0.17%	99.82%	0.18%	100.00%	0.00%	99.81%	0.19%	99.95%	0.05%	99.98%	0.02%	99.98%	0.02%
Dab2	97.48%	2.52%	97.73%	2.27%	97.95%	2.05%	97.74%	2.26%	96.50%	3.50%	97.89%	2.11%	97.89%	2.11%
Dab2ip	98.78%	1.22%	99.46%	0.54%	99.16%	0.84%	98.79%	1.21%	99.20%	0.80%	99.73%	0.27%	99.73%	0.27%
Dact1	99.99%	0.01%	99.93%	0.07%	99.99%	0.01%	99.81%	0.19%	99.99%	0.01%	99.94%	0.06%	99.94%	0.06%
Dapk1	99.85%	0.15%	99.89%	0.11%	100.00%	0.00%	100.00%	0.00%	100.00%	0.00%	100.00%	0.00%	100.00%	0.00%
Dbc1	99.22%	0.78%	99.01%	0.99%	99.89%	0.11%	99.48%	0.52%	99.60%	0.40%	99.91%	0.09%	99.91%	0.09%
Dkk3	94.08%	5.92%	88.64%	11.36%	94.16%	5.84%	94.63%	5.37%	95.07%	4.93%	94.62%	5.18%	94.62%	5.18%
Dlc1	99.89%	0.11%	99.45%	0.55%	99.93%	0.07%	99.59%	0.41%	99.83%	0.17%	100.00%	0.00%	100.00%	0.00%
Ebf3	100.00%	0.00%	99.77%	0.23%	100.00%	0.00%	100.00%	0.00%	99.88%	0.12%	100.00%	0.00%	100.00%	0.00%
Egln2	100.00%	0.00%	100.00%	0.00%	100.00%	0.00%	99.96%	0.04%	99.92%	0.08%	100.00%	0.00%	100.00%	0.00%
Ep300	99.98%	0.02%	99.99%	0.01%	99.99%	0.01%	99.95%	0.05%	99.91%	0.09%	99.96%	0.04%	99.96%	0.04%
Fhit	99.58%	0.42%	99.62%	0.38%	99.75%	0.25%	99.31%	0.69%	99.20%	0.80%	99.93%	0.07%	99.93%	0.07%
Gadd45b	99.86%	0.14%	100.00%	0.00%	99.94%	0.06%	99.88%	0.12%	100.00%	0.00%	99.92%	0.08%	99.92%	0.08%
Gadd45g	99.93%	0.07%	100.00%	0.00%	99.94%	0.06%	99.74%	0.26%	99.99%	0.01%	100.00%	0.00%	100.00%	0.00%
Gata3	94.17%	5.83%	89.68%	10.32%	96.41%	3.59%	97.54%	2.46%	96.08%	3.92%	97.34%	2.66%	97.34%	2.66%
Gata4	99.46%	0.54%	98.90%	1.10%	99.29%	0.71%	98.65%	1.35%	98.18%	1.82%	99.25%	0.75%	99.25%	0.75%
Gata5	98.95%	1.05%	98.60%	1.40%	98.84%	1.16%	99.12%	0.88%	98.80%	1.20%	99.38%	0.62%	99.38%	0.62%
Gata6	94.83%	5.17%	94.22%	5.78%	94.79%	5.21%	90.77%	9.23%	94.03%	5.97%	95.65%	4.35%	95.65%	4.35%
Gstp1	99.17%	0.83%	99.12%	0.88%	99.24%	0.76%	98.24%	1.76%	99.12%	0.88%	99.55%	0.45%	99.55%	0.45%
Hhip	100.00%	0.00%	99.98%	0.02%	100.00%	0.00%	100.00%	0.00%	100.00%	0.00%	99.99%	0.01%	99.99%	0.01%
Hic1	80.83%	19.17%	82.80%	17.20%	87.16%	12.84%	87.72%	12.28%	83.22%	16.78%	91.12%	8.88%	91.12%	8.88%
Hrasls	99.94%	0.06%	99.80%	0.20%	100.00%	0.00%	100.00%	0.00%	100.00%	0.00%	100.00%	0.00%	100.00%	0.00%
Igf2	99.43%	0.57%	98.86%	1.14%	99.43%	0.57%	99.25%	0.75%	98.91%	1.09%	99.19%	0.81%	99.19%	0.81%
Igfbp3	99.73%	0.27%	99.94%	0.06%	99.88%	0.12%	99.67%	0.33%	99.89%	0.11%	99.97%	0.03%	99.97%	0.03%
Igfbp7	99.30%	0.70%	99.30%	0.70%	99.25%	0.75%	99.40%	0.60%	98.83%	1.17%	99.43%	0.57%	99.35%	0.65%
Irf1	99.64%	0.36%	99.91%	0.09%	99.87%	0.13%	99.56%	0.44%	99.86%	0.14%	99.90%	0.10%	99.90%	0.10%
Jup	99.71%	0.29%	99.87%	0.13%	99.96%	0.04%	99.87%	0.13%	99.68%	0.32%	99.98%	0.02%	99.98%	0.02%
Lox	100.00%	0.00%	99.92%	0.08%	99.95%	0.05%	99.71%	0.29%	99.98%	0.02%	99.97%	0.03%	99.97%	0.03%
Mad2l1	99.91%	0.09%	99.96%	0.04%	99.93%	0.07%	99.58%	0.42%	99.95%	0.05%	100.00%	0.00%	100.00%	0.00%
Mcl1	100.00%	0.00%	99.90%	0.10%	99.93%	0.07%	99.81%	0.19%	100.00%	0.00%	100.00%	0.00%	100.00%	0.00%
Mih1	99.07%	0.93%	99.39%	0.61%	99.35%	0.65%	99.21%	0.79%	99.06%	0.94%	99.92%	0.08%	99.92%	0.08%
Msh2	100.00%	0.00%	100.00%	0.00%	100.00%	0.00%	100.00%	0.00%	100.00%	0.00%	100.00%	0.00%	100.00%	0.00%
Msh3	99.89%	0.11%	99.97%	0.03%	99.98%	0.02%	99.78%	0.22%	99.96%	0.04%	99.99%	0.01%	99.99%	0.01%
Myd1	93.78%	6.22%	95.59%	4.41%	97.79%	2.21%	92.29%	7.71%	97.36%	2.64%	97.62%	2.38%	97.62%	2.38%
Nae1	100.00%	0.00%	100.00%	0.00%	100.00%	0.00%	100.00%	0.00%	99.89%	0.11%	100.00%	0.00%	100.00%	0.00%
Ndrp2	99.33%	0.67%	99.16%	0.84%	99.20%	0.80%	98.87%	1.13%	98.81%	1.19%	99.36%	0.64%	99.36%	0.64%
Ndufa13	99.56%	0.44%	45.73%	54.27%	47.53%	52.47%	49.49%	50.51%	99.62%	0.38%	99.52%	0.48%	99.52%	0.48%
Ogdh1	99.93%	0.07%	99.82%	0.18%	99.91%	0.09%	99.48%	0.52%	99.53%	0.47%	99.94%	0.06%	99.94%	0.06%
Osrm	99.94%	0.06%	100.00%	0.00%	99.96%	0.04%	99.90%	0.10%	100.00%	0.00%	100.00%	0.00%	100.00%	0.00%
Otdc4	100.00%	0.00%	100.00%	0.00%	100.00%	0.00%	99.87%	0.13%	100.00%	0.00%	100.00%	0.00%	100.00%	0.00%
Pou3f1	99.30%	0.70%	99.61%	0.39%	99.64%	0.36%	99.12%	0.88%	99.31%	0.69%	100.00%	0.00%	100.00%	0.00%
Prdm2	88.57%	11.43%	92.34%	7.66%	90.91%	9.09%	91.54%	8.46%	89.57%	10.43%	90.81%	9.19%	90.81%	9.19%
Prdm5	99.45%	0.55%	98.35%	1.65%	99.75%	0.25%	99.75%	0.25%	99.86%	0.14%	99.50%	0.50%	99.50%	0.50%
Pten	99.85%	0.15%	99.92%	0.08%	100.00%	0.00%	100.00%	0.00%	100.00%	0.00%	100.00%	0.00%	100.00%	0.00%
Ptpro	99.96%	0.04%	99.69%	0.31%	100.00%	0.00%	99.93%	0.07%	100.00%	0.00%	99.93%	0.07%	99.93%	0.07%
Rad23a	99.97%	0.03%	99.92%	0.08%	99.99%	0.01%	99.77%	0.23%	99.85%	0.15%	99.97%	0.03%	99.97%	0.03%
Rarb	97.42%	2.58%	99.31%	0.69%	99.40%	0.60%	97.95%	2.05%	99.16%	0.84%	99.89%	0.11%	99.89%	0.11%
Rasl10a	99.73%	0.27%	99.90%	0.10%	99.67%	0.33%	99.59%	0.41%	99.54%	0.46%	99.85%	0.15%	99.85%	0.15%
Rassf1	99.12%	0.88%	99.53%	0.47%	99.37%	0.63%	99.12%	0.88%	98.97%	1.03%	99.64%	0.36%	99.64%	0.36%
Rassf3	99.73%	0.27%	99.74%	0.26%	99.88%	0.12%	99.79%	0.21%	99.82%	0.18%	99.77%	0.23%	99.77%	0.23%
Rassf4	98.97%	1.03%	98.31%	1.69%	99.33%	0.67%	99.43%	0.57%	98.69%	1.31%	99.33%	0.67%	99.33%	0.67%
Rassf5	100.00%	0.00%	99.90%	0.10%	99.97%	0.03%	99.68%	0.32%	99.60%	0.40%	99.83%	0.17%	99.83%	0.17%
Rbp1	99.86%	0.14%	99.88%	0.12%	99.96%	0.04%	99.69%	0.31%	99.92%	0.08%	99.95%	0.05%	99.95%	0.05%
Reln	100.00%	0.00%	100.00%	0.00%	100.00%	0.00%	99.98%	0.02%	100.00%	0.00%	100.00%	0.00%	100.00%	0.00%
Rprm	100.00%	0.00%	100.00%	0.00%	100.00%	0.00%	99.67%	0.33%	100.00%	0.00%	100.00%	0.00%	100.00%	0.00%
Rps15	99.59%	0.41%	99.60%	0.40%	99.75%	0.25%	99.29%	0.71%	99.08%	0.92%	99.75%	0.25%	99.75%	0.25%
Sema3b	99.41%	0.59%	99.18%	0.82%	99.82%	0.18%	98.86%	1.14%	99.61%	0.39%	99.54%	0.46%	99.54%	0.46%
Sirp1	100.00%	0.00%	99.92%	0.08%	100.00%	0.00%	100.00%	0.00%	100.00%	0.00%	100.00%	0.00%	100.00%	0.00%
Sirp2	99.88%	0.12%	99.83%	0.17%	99.99%	0.01%	99.86%	0.14%	99.99%	0.01%	100.00%	0.00%	100.00%	0.00%
Sirp4	99.21%	0.79%	99.62%											