

Table S1 – Primers and PCR conditions for bisulfite genomic sequencing, quantitative RT-PCR, and RACE

Gene	Figures	Primer sequences	PCR conditions	CpGs	Product
M-DNA	1A	ATGGAAGACGCCAAAAACATAA	95°C, 10 m:(94°C, 30 s: 55°C, 30 s:		736 bp
		CGTGATGGAATGGAACAACA	72°C, 30 s)×38 cycles: 72°C, 7 m		
M-DNA	2A	GATGTAAAAATATAAAGAAAGGT	95°C, 10 m:(94°C, 30 s: 54°C, 30 s:	4	718 bp
		AAACAACACTTAAATCACAATAT	72°C, 1 m)×40 cycles: 72°C, 7 m		
SINE3-1a	2B	TTTAATTTGTGGTTTGTGTGAGTTT	95°C, 10 m:(94°C, 30 s: 55°C, 30 s:	15	350 bp
		CCACCAATATACAACATCCACTTAA	72°C, 30 s)×25 cycles: 72°C, 7 m		
	AAGGGGATATTATATTGTTAGTGGG (nest)	95°C, 10 m:(94°C, 30 s: 55°C, 30 s:	7	148 bp	
	ATAAAAAAACTTTAACAAAAACACC (nest)	72°C, 30 s)×25 cycles: 72°C, 7 m			
DANA	2B	TAATATAAAAAATAAAATAAAATAAATTTTG	95°C, 10 m:(94°C, 30 s: 50°C, 30 s:	18	469 bp
		CACCAAAATATTTC AATACTTTCT	72°C, 1 m)×35 cycles: 72°C, 7 m		
<i>flila</i>	2B	GTTTTTAATGGGTTTTGTATATTT	95°C, 10 m:(94°C, 30 s: 55°C, 30 s:	11	292 bp
		CTCACAAAAC TACTATTATCAACATAACTA	72°C, 30 s)×35 cycles: 72°C, 7 m		
<i>runx1</i>	2B	TTTTTGGGGG TTAGGAGAG TAT	95°C, 10 m:(94°C, 30 s: 50°C, 30 s:	14	210 bp
		CCCATATAAAAACAAATCTAATACCTTAAA	72°C, 1 m)×40 cycles: 72°C, 7 m		
5S rRNA	2B	TTTGGTAGTTGATTTAAATAGTTAA	95°C, 10 m:(94°C, 30 s: 53°C, 30 s:	7	160 bp
		CTTACAACACCTAATATTCCCAAAC	72°C, 30 s)×40 cycles: 72°C, 7 m		
KenoDr1	2B	GGTTTGTATTGAATTATTGGT	95°C, 10 m:(94°C, 30 s: 55°C, 30 s:	16	282 bp
		AAATCATTTTCCTTAAAAATCA	72°C, 30 s)×40 cycles: 72°C, 7 m		
LINE-1	2B	GGTTGGAGATGGTTTATTTT	95°C, 10 m:(94°C, 30 s: 55°C, 30 s:	50	551 bp
		TTCCTAAACCACAAATATAAACAT	72°C, 30 s)×33 cycles: 72°C, 7 m		
<i>aid</i>	3A, 5C	TCAGATTCTGCAGCCTTGC	95°C, 30s:(94°C, 5 s: 59°C, 20 s)		136 bp
		CAGCACCATTTCTCTTCATCC	×40 cycles		
<i>apobec2a</i>	3A	CACAACGCACCCAAGTGA	95°C, 30s:(94°C, 5 s: 59°C, 20 s)		227 bp
		CCTGTGATGGTCTCGAATG	×40 cycles		
<i>apobec2b</i>	3A	ATGGCAGACAAAAAGGACAG	95°C, 30s:(94°C, 5 s: 59°C, 20 s)		287 bp
		CGGTCTCCTACAATGATCTC	×40 cycles		
<i>mbd4</i>	3A	AAGAGACGCTTCCATGA	95°C, 30s:(94°C, 5 s: 59°C, 20 s)		340 bp
		TTATGATCGTCTGGAGTGAC	×40 cycles		
<i>gadd45a</i>	3B	CGCTTAATGTGGACCCAGAC	95°C, 30s:(94°C, 5 s: 59°C, 20 s)		80 bp
		CTGGAGGGCCACATCTTTTA	×40 cycles		

<i>gadd45al</i>	3B	CTCGGTGATTAAGGCTCTGG	95°C, 30s:(94°C, 5 s: 59°C, 20 s) ×40 cycles		110 bp	
		CGTTATCAGGGTCCACATTG				
<i>gadd45b</i>	3B	CCTCGTCACTAACTCTCAATGC	95°C, 30s:(94°C, 5 s: 59°C, 20 s) ×40 cycles		134 bp	
		CGCGAATAGTTCAGCGTTCT				
<i>gadd45bl</i>	3B	GCACTGAGAGAAAAATGGAGAC	95°C, 30s:(94°C, 5 s: 59°C, 20 s) ×40 cycles		128 bp	
		GCTGTCTGGATCCACATTCA				
<i>gadd45g</i>	3B	ACTACTGGCGATAGAATGCAG	95°C, 30s:(94°C, 5 s: 59°C, 20 s) ×40 cycles		129 bp	
		GCTGTCTGGGTCAACATTCA				
<i>gadd45gl</i>	3B	TGCTTATCACGAAACCTGCT	95°C, 30s:(94°C, 5 s: 59°C, 20 s) ×40 cycles		116 bp	
		GGGCAGAGTGATCTCAGGAA				
<i>mbd4</i>	4B,C,D	AAGAGACGCTCTTCCATGA	95°C, 10 m:(94°C, 30 s: 55°C, 30 s: 72°C, 30 s)×40 cycles: 72°C, 7 m		340 bp	
	S1(A)	TTATGATCGTCTGGAGTGAC				
<i>aid</i>	5B	AGTGTGCTCATGACCCAGA	95°C, 10 m:(94°C, 30 s: 65°C, 30 s: 72°C, 30 s)×40 cycles: 72°C, 7 m		200 bp	
		CACAACGCACCCAAGTGA				
<i>EF1a1</i>	5D	TGCAGACTTTGTGACCTTGC	98°C, 30 s:(98°C, 5 s: 67°C, 10 s: 72°C, 1 m)×25 cycles: 72°C, 7 m		1,439 bp	
<i>neurod2</i>		GTTTTTAAATAGGTATAGGT	95°C, 10 m:(94°C, 30 s: 54°C, 30 s: 72°C, 1 m)×40 cycles: 72°C, 7 m	19	460 bp	
		CAAACAAAATTACATACCTA				
		AGGTATAGGTTAGGTTATGT (nest)	72°C, 30 s)×35 cycles: 72°C, 7 m		43	438 bp
		CATACCTACTCTTATACCAAAA (nest)				
<i>sox1a</i>	6A,B	TTTTGTTTAAAAAGGATAAGTAT	95°C, 10 m:(94°C, 30 s: 50°C, 30 s: 72°C, 1 m)×35 cycles: 72°C, 7 m	43	555 bp	
	S2	AATACATACTAATCATCTCT				
		GTTAGAGGTTGGAGAGTTT (nest)	95°C, 10 m:(94°C, 30 s: 55°C, 30 s: 72°C, 30 s)×35 cycles: 72°C, 7 m		459 bp	
		TAATCATCTCTCTCAAATCTC (nest)				
<i>atoh1a</i>		AAAGATTGTTGGGGTAAT	95°C, 10 m:(94°C, 30 s: 50°C, 30 s: 72°C, 1 m)×35 cycles: 72°C, 7 m	13	405 bp	
		AATTATTATACCCAACTCTA				
<i>mbd4</i>	S1(A)	ACTGGTCTTGCGCTTCTCTACAGTCTCTCAG (5'RACE)	(94°C, 5 s: 65°C, 10 s: 72°C, 3 m) ×28 cycles		~1.9 kb	
		GCTGGAGAAGAGATGAGGCAGAAACTC (3'RACE)	95°C, 10 m:(94°C, 30 s: 66°C, 30 s: 72°C, 1 m)×40 cycles: 72°C, 7 m		~750 bp	
<i>mbd4</i>	S1(B)	TGTTCTAACCCGCTTCTGCT	95°C, 10 m:(94°C, 30 s: 55°C, 30 s: 72°C, 30 s)×40 cycles: 72°C, 7 m		multiple	
		TTTCTCCGCTCTCTTCTTC				

<i>rpl13a</i>	3A,B	TCTGGAGGACTGTAAGAGGTATGC	95°C, 30s:(94°C, 5 s: 59°C, 20 s) ×40 cycles		148 bp
	5C	AGACGCACAATCTTGAGAGCAG			