

Table S1. Supplementary material 1. Primers and PCR-RFLP conditions for the genotyping of *DNMT*, *MTHFR* and *MTRR* genes polymorphisms with their mQTL timepoint

Gene Polymorphisms (dbSNP rs) Position	Forward Primer Reverse Primer	PCR conditions	PCR Product (bp)	Restriction Endonuclease Enzyme	Reference	mQTL* timepoint
<b>DNMT1</b> <b>+32204 A/G</b> <b>rs2228611</b> <b>exon</b> <b>chromosome 19</b>	5'-GTACTGTAAGCACGGTCACCTG-3' 5'-TATGTTGTCCAGGCTCGTCTC-3'	94 °C (5 min) 35x: 94 °C (30s), 55 °C (30s), 72 °C (30s) 72 °C (5 min)	261	BcoDI	[50]	Birth Childhood Adolescence Middle Age Pregnancy
<b>DNMT3A</b> <b>-448 A/G</b> <b>rs1550117</b> <b>promoter</b> <b>chromosome 2</b>	5'-ACACACCGCCCTCACCCCTT-3' 5'-TCCAGCAATCCCTGCCCA-3'	94 °C (5 min) 35x: 94 °C (30s), 55 °C (45s), 72 °C (30s) 72 °C (5 min)	358	HpyCH4III	[51]	-
<b>DNMT3B</b> <b>-579 G/T</b> <b>rs1569686</b> <b>promoter</b> <b>chromosome 20</b>	5'-GAGGTCTCATTATGCCTAGG-3' 5'-GGGAGCTCACCTTCTAGAAA-3'	94 °C (5 min) 35x: 94 °C (30s), 49 °C (30s), 72 °C (30s) 72 °C (5 min)	225	PvuII-HF	[52]	Birth Childhood Adolescence Middle Age Pregnancy
<b>DNMT3B</b> <b>-149 C/T</b> <b>rs2424913</b> <b>promoter</b> <b>chromosome 20</b>	5'-TTGTCCTGAAGCTGGCTACC-3' 5'-ACCAGGAGAGAAGCCAACAG-3'	94 °C (5 min) 35x: 94 °C (30s), 54 °C (30s), 72 °C (30s) 72 °C (5 min)	431	AvrII	[53]	Birth Childhood Adolescence Middle Age Pregnancy
<b>MTHFR</b> <b>677C&gt;T</b> <b>rs1801133</b> <b>exon</b> <b>chromosome 1</b>	5'TGAAGGAGAAGGTGTCTGCGGGA3' 5'AGGACGGTGCGGTGAGAGTG3'	94 °C (2 min) 40x: 94 °C (30s), 62 °C (30s), 72 °C (30s) 72 °C (7 min)	198	Hinfl	[54]	Childhood Adolescence
<b>MTHFR</b> <b>1298A&gt;C</b> <b>rs1801131</b> <b>exon</b> <b>chromosome 1</b>	5'CTTTGGGGAGCTGAAGGACTACTA3' 5'CACTTTGTGACCATTCCGGTTTG3'	92 °C (2 min) 40x: 92 °C (60s), 56 °C (60s), 72 °C (30s) 72 °C (7 min)	163	Mbo II	[54]	Birth Childhood Adolescence Middle Age Pregnancy
<b>MTRR</b> <b>66A&gt;G</b> <b>rs1801394</b> <b>exon</b> <b>chromosome 5</b>	5'CAGGCAAAGGCCATCGCAGAAGACAT3' 5'CACTTCCCAACCAAAATTCTTCAACG3'	92 °C (2 min) 35x: 92 °C (60s), 56 °C (60s), 72 °C (90s) 72 °C (7 min)	150	Afl III	[55]	Birth Childhood Adolescence Middle Age Pregnancy

DNMT – DNA methyltransferase; PCR – polymerase chain reaction; RFLP – restriction fragment length polymorphism; mQTL – methylation quantitative trait loci

\*derived from mQTLdb