

**Supplemental Table 1. Number of gene expression probes corresponding to each class of genomic repeats and their correlation with serum folate profile.**

Repeat Class/Family	Total # probes on array	Filter passed A/J	(-) correlation to A/J serum folate	Filter passed C57BL6/J	(-) correlation to C57BL/6J serum folate
LINE/L1	60	9	0	2	0
LTR	4	0	0	0	0
LTR/ERV1	12	8	0	6	0
LTR/ERVK (IAP)	27 (13)	5 (2)	0 (0)	9 (7)	2 (2)
LTR/ERVL	3	0	0	0	0
LTR/MaLR	23	4	0	1	0
SINE/Alu	4	1	0	0	0
SINE/B2	11	1	0	0	0
All probes	25798	10322	117	7913	230

Filter refers to number of genes that showed greater variation in greater gene expression variance across treatments compared to average variance among replicates. The threshold for negative correlation to serum folate profile was nominal p value 0.05.

**Supplemental Table 2. Number of gene expression probes corresponding to x-inactivated genes or imprinted genes and their correlation with serum folate profile.**

Gene Class	Total # probes on array	Filter passed A/J	(-) correlation to A/J serum folate	Filter passed C57BL6/J	(-) correlation to C57BL/6J serum folate
X-inactivated	691	258	3	190	6
Imprinted	71	28	0	22	0
All probes	25798	10322	117	7913	230

Filter refers to number of genes that showed greater variation in greater gene expression variance across treatments compared to average variance among replicates. The threshold for negative correlation to serum folate profile was nominal p value 0.05.