

**Additional file 10:** Results from KEGG pathway analysis of genes with a differential methylation in males and females for the autosomal chromosome genes.

Higher DNA methylation in Males						
Pathway (total number of genes in the pathway)	Observed number of genes	Expected number of genes	Ratio Observed/ expected	Raw <i>p</i> -value	Adj. <i>p</i> -value	Observed genes
Adipocytokine signaling pathway (68)	3	0.26	11.43	0.0023	0.0299	<i>IRS1, PRKAG2, NPY</i>
Higher DNA methylation in Females						
Pathway (total number of genes in the pathway)	Observed number of genes	Expected number of genes	Ratio Observed/ expected	Raw <i>p</i> -value	Adj. <i>p</i> -value	Observed genes
Cell adhesion molecules (CAMs) (130)	5	0.86	5.83	0.0017	0.0408	<i>HLA-G, ITGAL, HLA-C, CNTNAP2, NRXN1</i>