Description of Additional Supplementary Files

File name: Supplementary Data 1

Description: Distribution of maternal BMI, demographic variables, birth outcomes, and covariates, by cohort. IQR = Inter Quartile Range.

File name: Supplementary Data 2

Description: Effective number of probes, number of Bonferroni significant CpGs and lambda values for the cohort-specific models, adjusted and unadjusted for cellular heterogeneity. The number of components capturing cellular heterogeneity used for each cohort is also defined.

File name: Supplementary Data 3

Description: Meta-analysis results for the association between maternal ppBMI and placental DNAm, adjusted for cellular heterogeneity.

File name: Supplementary Data 4 **Description:** Meta-analysis results for the association between maternal ppBMI and placental DNAm, unadjusted for cellular heterogeneity.

File name: Supplementary Data 5 **Description:** Enrichment for functional pathways among CpGs associated with maternal ppBMI, annotated to the closest gene from the Illumina annotation file.

File name: Supplementary Data 6

Description: SNPs associated with birth weight and their proximity to CpGs associated with maternal ppBMI in placenta.

File name: Supplementary Data 7 **Description:** CpGs associated with maternal ppBMI in placenta and cord blood.

File name: Supplementary Data 8 **Description:** CpG positions discarded due to a detection p-value > 0.01 in each cohort.

File name: Supplementary Data 9 Description: Numerical source data for Figure 3.