

## Description of Additional Supplementary Information

File Name: Supplementary Data 1

Description: Quality metrics and global methylation values from whole-genome bisulfite.

File Name: Supplementary Data 2

Description: Clinical and molecular data of the 30 breast tumor samples analyzed by whole-genome bisulfite sequencing.

File Name: Supplementary Data 3

Description: PMD frequency of all annotated CpG islands.

File Name: Supplementary Data 4

Description: Genes that are downregulated at least 2.5 log<sub>2</sub>-fold when inside PMDs.

File Name: Supplementary Data 5

Description: External data used in this study.