



Supplementary Figure S1. Electrophoretic mobility shift assays with methylated and hydroxymethylated DNA substrates. Increasing amounts of Uhrf1, its SRA domain ($\text{SRA}^{\text{Uhrf1}}$) or the MBD domain of MeCP2 ($\text{MBD}^{\text{MeCP2}}$) were incubated with two differentially ATTO-labeled DNA substrates, which contain either one central fully methylated or fully hydroxymethylated CpG site (FMB-ATTO700 or FhMB-ATTO550, respectively), in direct competition. Samples were subjected to 6 % non-denaturing PAGE and analyzed with a Typhoon scanner (GE Healthcare). The first, second and third columns show the scans for GFP/YFP, ATTO700 and ATTO550 fluorescence, respectively. The overlay of the two ATTO channels is shown in the fourth column (FMB: red, FhMB:green).