H. pylori-negative control, antrum CDH1 ARR- PPARG TRA-MMP2CDKN2A APC RUNX2 RUNX3 TFF3 TFF2 TFF1 PGC ATP4B PGA GHRL UM UM UM ÚM U M U M U M U M U M U M U M UM UM UM UM UM Level 3 Level 2 Level 2 Level 5 Level 5 Level 5 Level 6 Level 4 Level 7 Level 5 Level 4 Level 5 Level 5 Level 4 Level 6 Level 8 Level 8 Level 8 Level 9 Level Inter- Inter- Under- Inter- Inter- Over-Inter- Over-Inter- Inter-Inter- Inter- Inter- Over-H. pylori-negative control, body CDH1 ARR- PPARG TRA. MMP2 CDKN2A APC RUNX2 RUNX3 TFF3 TFF2 TFF1 PGC ATP4B PGA UM UMUMUM UM UM Level 2 Level 2 Level 2 Level 4 Level 5 Level 3 Level 6 Level 4 Level 7 Level 4 Level 5 Level 6 Level 5 Level 5 Level 5 Level 6 Level 7 Level 6 Level 7 Level 6 Level 7 Level 7 Level 6 Level 7 Level 7 Level 8 Level 9 Level Inter- Inter- Under- Under- Inter- Inter-Over-Inter- Under- Over- Inter-Inter- Over- Over-Inter-H. pylori-positive control, antrum CDH1 ARR- PPARG TRA- MMP2 CDKN2A APC RUNX2 RUNX3 TFF3 TFF2 TFF1 PGC ATP4B PGA UMUM U M U M U M UMUMUMUMUMUMLevel 6 Level 4 Level 6 Level 8 Level 8 Level 6 Level 6 Level 4 Level 7 Level 5 Level 5 Level 5 Level 5 Level 5 Level 7 Level 6 Level 6 Level 7 Level 7 Level 7 Level 7 Level 7 Level 7 Level 8 Level 9 Level Over- Over- Under- Inter- Over- Inter- Over-Inter- Over-Inter-Inter-Inter-Inter-H. pylori-positive control, body CDH1 ARR- PPARG TRA- MMP2 CDKN2A APC RUNX2 RUNX3 TFF3 TFF2 TFF1 PGC ATP4B PGA UMUMUM UM UM UM UM UMUMUM UM UM UM Level 4 Level 3 Level 2 Level 5 Level 6 Level 4 Level 5 Level 4 Level 5 Level 8 Level 4 Level 5 Level 5 Level 6 Level 4 Level 5 Level 6 Level 6 Level 6 Level 7 Level 7 Level 8 Level 8 Level 8 Level 9 Level Over- Inter- Under- Inter- Over- Over-Inter-Inter-Inter-Over- Inter-Inter- Inter-Inter-Inter-Under-

S4 Fig. Representative autoradiograph of semi-quantitative methylation analysis in the 16 transitional-CpG sites. The methylation densities were calculated by the proportion of the methylation (M) band intensity against the unmethylation (U) and methylation band intensity. The methylation status of each CpG site was classified into 10 levels with 10% methylation increments, and classified into undermethylation (under-) and overmethylation (over-) based on the intermediate methylation level (inter-). Note that antrum-specific *TFF3* was overmethylated in the body, and body-specific *GHRL* in the antrum.