Supplemental Fig. S1. Significant marker-trait associations for grain protein concentration for the low and normal nitrogen treatments and the geometric mean stress index in the two-row panel (a) and the six-row panel (b). Black lines indicate associations identified under the regular association mapping model, and red lines indicate associations identified when the 6H GPC QTL haplotype was modeled as a fixed effect. In the two-row panel, several associations were identified under both models, so the red lines overlap the black lines: under low nitrogen, the locus at 2.13 cM on chromosome 7H; under normal nitrogen, the loci at 49.67 cM and 52.19 cM on chromosome 6H; and for the geometric mean index, the loci at 49.67 cM and 52.19 cM on chromosome 6H, and the locus at 2.13 cM on chromosome 7H.