Supporting Information

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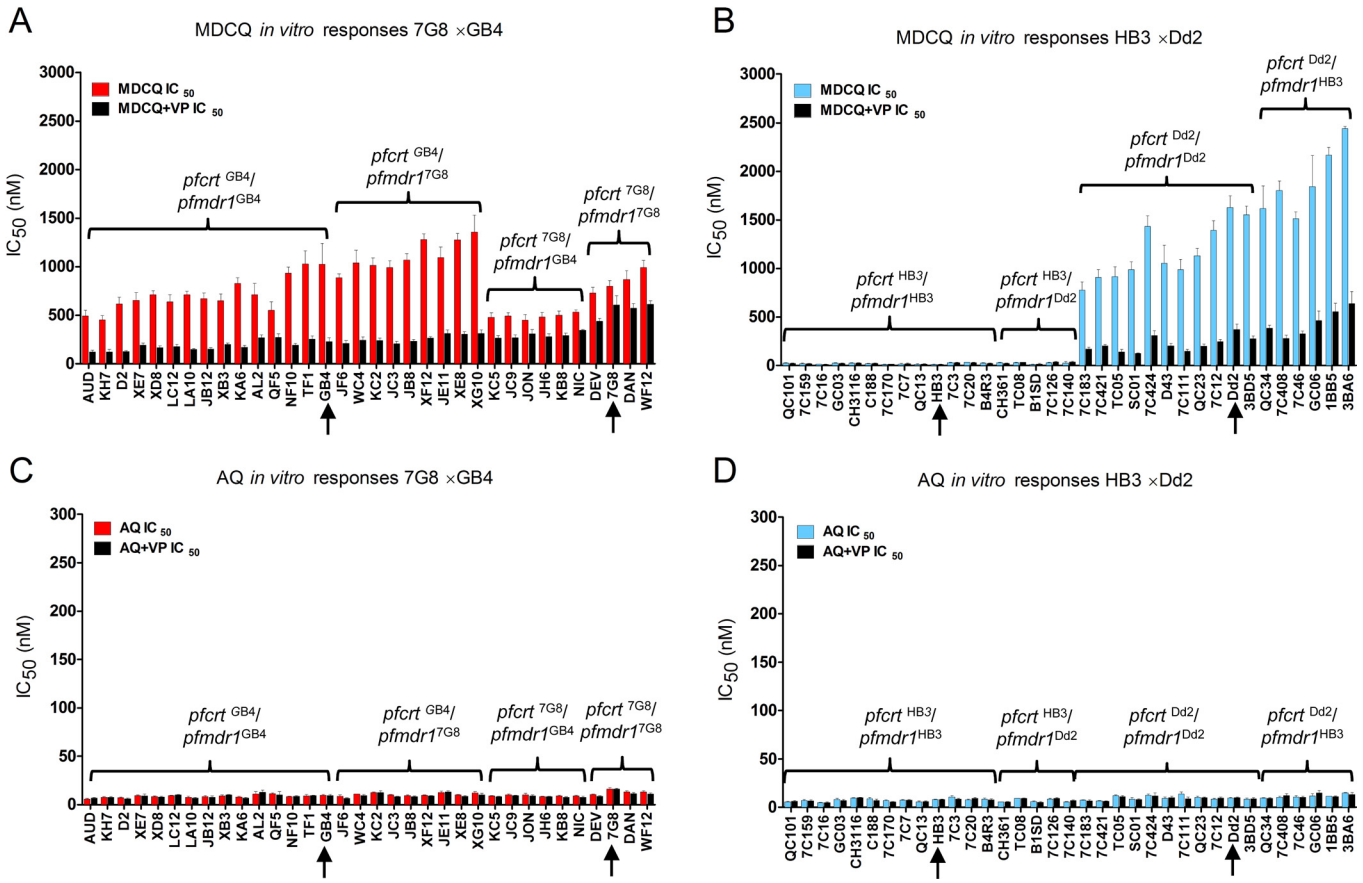

Fig. S1. In vitro MDCQ and AQ responses of individual *P. falciparum* clones. Mean MDCQ IC_{50} values for parasites from the 7G8×GB4 (*A*) and HB3×Dd2 (*B*) crosses and mean AQ IC_{50} values for parasites from the 7G8×GB4 (*C*) and HB3×Dd2 (*D*) crosses are shown. The mean values and standard errors are from at least six separate drug assays in the absence (red for 7G8×GB4 and blue for HB3×Dd2) or presence (black) of 0.8 μM VP. Arrows point to results from the parents of each genetic cross. The *pfcrt* and *pfmdr1* inherited alleles are indicated above each group. Similar features of VP reversal were found for MDCQ and CQ with the CQ-resistant progeny, although at much higher IC_{50}s with MDCQ than with CQ. CQ-sensitive clones carrying the $pfcrt^{HB3}$ allele showed no significant change of MDCQ IC_{50} in the presence of VP. VP in combination with AQ also produced little or no reduction of progeny IC_{50}s.

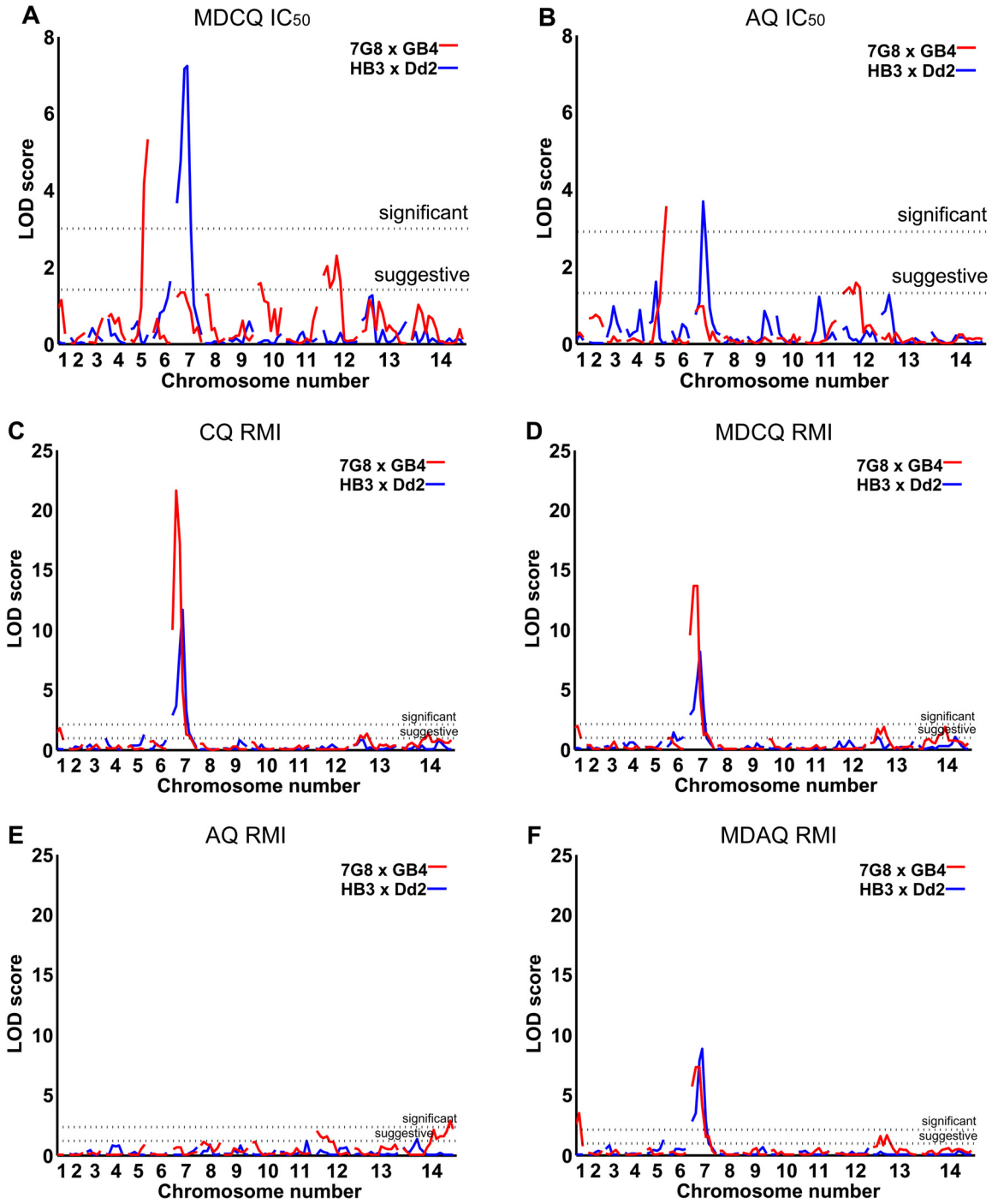

Fig. S2. QTL of in vitro responses from 7G8×GB4 and HB3×Dd2 genetic crosses. (*A* and *B*) QTL scans from the IC_{50} values for MDCQ and AQ. (*C–F*) QTL scans from CQ, MDCQ, AQ, and MDAQ response modification index (RMI) by 0.8 μM VP. Dashed lines represent the 95% C.I. threshold (significant) and 63% C.I. threshold (suggestive) after 1,000 permutations. Small differences in the exact placement of the peaks may reflect differences in the genetic distances of linkage markers of the crosses. RMI is defined as the ratio of the IC_{50} in the presence of 0.8 μM VP over the IC_{50} without VP (1).

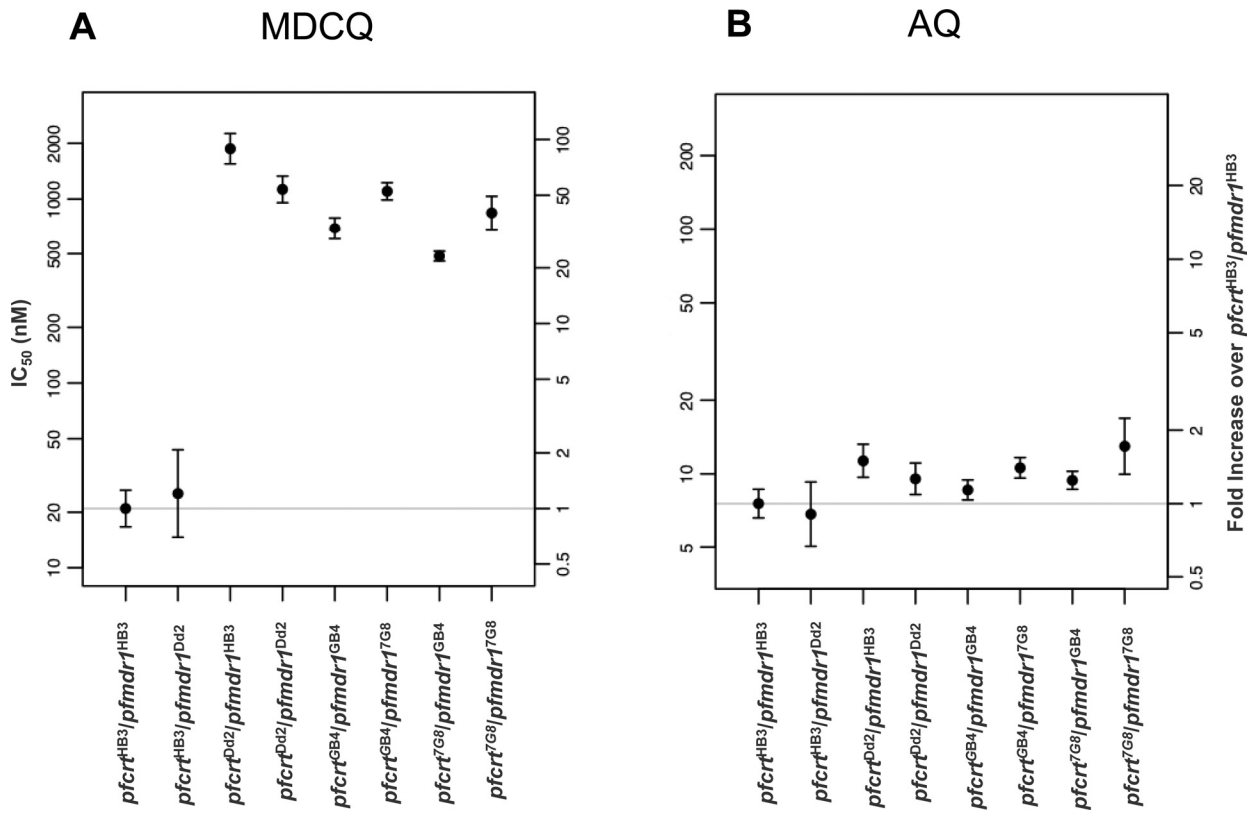

Fig. S3. Average in vitro MDCQ and AQ responses of *P. falciparum* clones grouped according to their *pfcrt* and *pfmdr1* haplotypes. (*A*) Average IC_{50} responses to MDCQ. (*B*) Average IC_{50} responses to AQ. Geometric mean IC_{50} values and 95% C.I. are indicated along with fold increases over the group of parasites carrying the *pfcrt* ^{HB3}and *pfmdr1*^{HB3} alleles. Note the log scale on the IC_{50} values along the vertical axes.

Other Supporting Information Files

Table S1 (XLS)
Table S2 (XLS)
Table S3 (XLS)
Table S4 (XLS)
Table S5 (XLS)
Table S6 (XLS)