



Figure S8: QTLs mapped for YPE and 5-FU by BSA and ISA. For YPE (2% ethanol, upper two panels) allele frequencies deduced from the two BSA replicates (red and blue) were highly reproducible. A QTL peak on chr 11 and one on chr 14 (*MKT1* locus) is common for BSA and ISA. Dashed horizontal line in ISA marks the significant threshold. For 5-FU (30µM 5-fluorouracil, lower two panels) the replicates from BSA are not reproducible, except for the *URA3* locus. Sequencing results suggest that beneficial mutations in

individual cells occurred during the selection process of BSA and result in random allele selection.