



Supplemental Figure S1. Impact of proxy generation parameters on imputation accuracy. **(a)** Imputation accuracy (Genotype level R2) of proxy-panel-based imputation protocol with respect to increasing $p_1^{(w)}$, variant selection weight for first degree term in allele hashing. **(b)** Impact of changing $p_2^{(w)}$, variant selection weight for 2nd degree term in allele hashing. **(c)** Impact of changing $p_3^{(w)}$, variant selection weight for 3rd degree term in allele hashing. **(d)** Impact of changing minimum number of variants used in allele hashing. **(e)** Imputation accuracy vs increasing normalized population size, $N_e^{(w)}$, that is used in local variant selection for hashing variants. **(f)** Imputation accuracy vs increasing window size for allele hashing, n_{vic} . **(g)** Imputation accuracy vs increasing standard deviation of genetic map distance noise, σ_g . **(h)** Imputation accuracy vs increasing permutation of window size for untyped variants.