



Figure S3 P-value based on IBS sharing. Assuming unrelated founders and Hardy-Weinberg equilibrium, exact IBS sharing probabilities for pedigree members were derived using conditional probabilities under Mendel's laws as a function of variant allele frequency (x-axis). The sharing probabilities calculated under the assumption of no IBS without IBD is $1/745 = 0.0013$, indicated by the dotted horizontal line. The multiple comparison corrected significance threshold is $0.05/16 = 0.0031$ indicated by the dashed horizontal line.