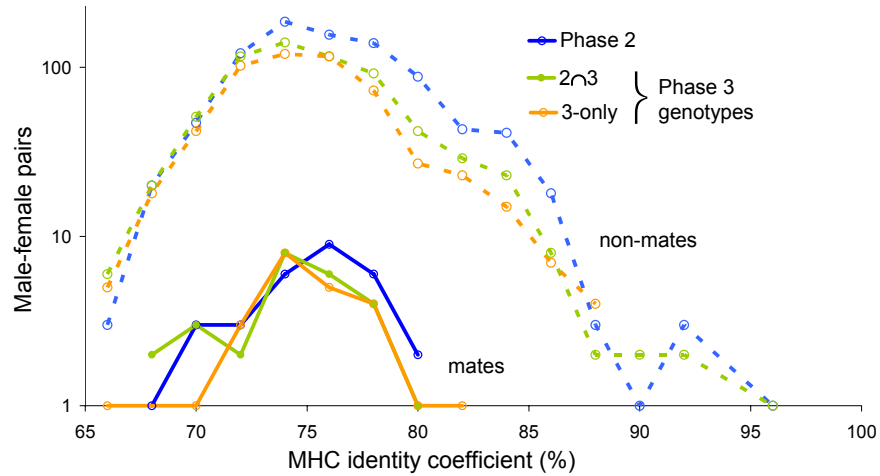


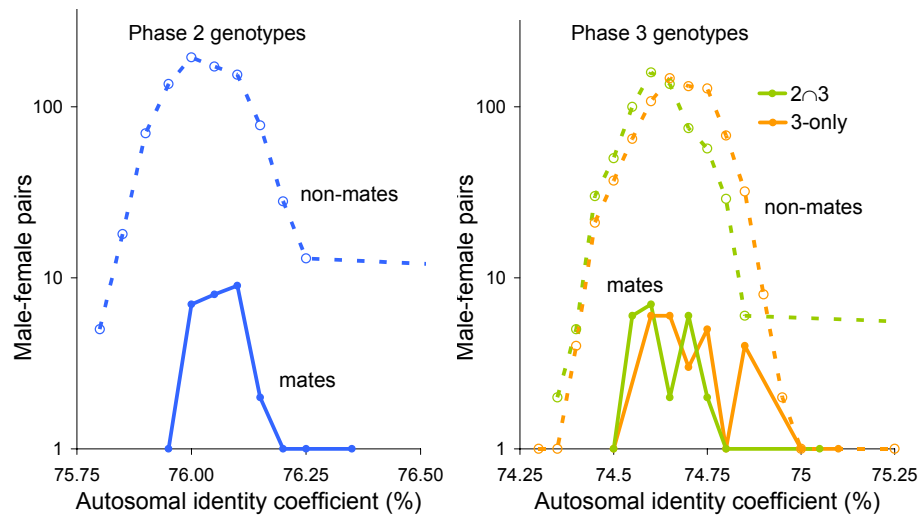
## Text S5. Analysis of Hap2 $\cap$ 3 couples with Hap2 and Hap3 genotypes

Because two sets of SNPs (Hap2 and Hap3) underlie identity coefficients plotted in Figure 2 and Figure 3, coefficients based on Hap3 data for couples present in both phases (2 $\cap$ 3) are shown in Supporting Figure 7:

### a. European couples



### b. Yoruban couples



**Supporting Figure 7. Identity coefficients of HapMap couples.** Distributions of coefficients based on Hap3 genotypes are similar for couples also present in Hap2 (2 $\cap$ 3) and those unique to Hap3 (3-only). Coefficients were based on unphased genotypes, MAF  $\geq$  1%, and het-het=100%. Autosomal identity coefficients were lower in Phase 3 because fewer SNPs with low minor allele frequencies were genotyped.