

# **Methods for Assessing Population Homogeneity Based on Genetic Background**

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## **Abstract:**

The notion that human populations are genetically heterogeneous in ways that are not obvious or consistent with overt social and/or phenotypic differences among individuals such as skin color and self-reported ethnicity is extremely controversial. In recent years methodology for assessing population homogeneity that take advantage of multilocus genotype data have been developed. These methods consider allele frequency differences between potential subgroups, genetic profile similarity, admixture proportions, and associations between unlinked marker loci. We describe the motivation and derivation of each approach and discuss their potential shortcomings.