

T-cell receptor variable alpha (TCRAV) polymorphisms in European, Chinese, South American, AfroCaribbean, and Gambian populations

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Interactions involving the T-cell receptor (TCR) and major histocompatibility complex (MHC) are fundamental to the generation of a specific immune response. The study of interpopulation differences in TCR genes may identify those genes which are subject to selection, and also provides useful information for future genetic studies in these populations. In this study we present analysis of five TCRAV polymorphisms, for V5S1, V6S1, V8S1, V17S1, and V21S1 loci in five human populations by single-strand conformational polymorphism (SSCP) analysis. Caucasian, Chinese, Gambian, AfroCaribbean, and South American Indians (Mapuches) showed marked interpopulation variation for both the silent (V5S1, V17S1, and V21S1) and coding (V6S1 and V8S1) polymorphisms. In general the alleles were conserved in the different populations, but new, additional variants were found for V5S1 and V17S1 in Gambians and Caucasians. V6S1 overall showed the highest nucleotide diversity, and V6S1 genotype distributions w