DXS10011: Studies on structure, allele distribution in three populations and genetic linkage to further q-telomeric chromosome X markers

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Abstract: The hypervariable tetranucleotide STR polymorphism DXS10011 is a powerful marker for forensic purposes. Investigation of this STR led to an allele nomenclature which is in consensus with the ISFG recommendations. DXS10011 is located at Xq28 and genetically closely linked to DXS7423 and DXS8377 but is unlinked to HPRTB and more distant X-chromosomal STRs. DXS10011 is a very complex marker exhibiting some structural variants within alleles of identical length. Two types of repeat structure (regular and inter-alleles) are known and described as types A and B. Two SNPs which are in strong linkage disequilibrium to the different sequence types were found in the repeat flanking region. The type A sequence consists of a long stretch of uninterrupted homogenous repeats which is highly susceptible to slippage mutation during male meiosis. © Springer-Verlag 2004.
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