

Y-STR HAPLOTYPE DISTRIBUTION IN TURKEY

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Analysis of sexual assault material, specifically in cases involving multiple sexual assault suspects, mixed male and female stains of all types of biological material is very important for forensic human identification. Y chromosome analysis has simplified greatly this type of analysis, once no more separation of male and female cells is required prior to typing. On the other hand the haploid nature of the Y chromosome makes it a very valuable marker in paternity cases and patrilineal relationships, even across several generations.

The use of the Y chromosome in forensic DNA identification requires the determination of its polymorphism in the population of interest. There is no sufficient information about various populations of the world today to decide whether or not the haplotypes of Y chromosome vary within populations. We wanted to establish a database of Y-STR haplotypes for Turkish population for a comparison with other populations primarily and to establish the required information for all types of probability calculations in casework.

Y haplotypes for 160 individuals coming from 8 different geographical areas of Turkey were determined by typing six tetranucleotide Y-STR loci with fluorescent-tagged primers. The analyzed Y chromosome STR loci are SYS19, DYS389II, DYS390, DYS391 and DYS393. The analysis was done in PE Biosystem 310 genetic analyzer.

The frequencies of the haplotype and their power of exclusion in paternity testing where the male lineage is in question will be discussed.