

用改进的MVR-PCR方法检测河北地区汉族人群D7S21基因座多态性 Studies of DNA Polymorphism at D7S21 Locus in Hebei Han Population

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摘要 为研究D7S21基因座在河北汉族人群分布的多态性,应用MVR-PCR (Minisatellite Variant Repeat-Polymerase Chain Reaction)方法和聚丙烯酰胺梯度凝胶电泳银染法对124名河北汉人无关个体D7S21基因座进行了快速检测,并进行数字编码。每一个体平均得到36个数字编码,未发现任何两个无关个体所有编码相同,两无关个体36个编码相同的概率为 3.48×10^{-18} 。三种重复单位a型、t型和0型出现的概率分别为:48.5%、49.4%和2.1%。该基因座杂合度为0.9876,非父排除率为0.9746,多态性信息含量为0.9872。研究表明,D7S21基因座在河北汉族人群中具有高度的多态性,聚丙烯酰胺梯度凝胶电泳银染法简便、快速,具有一定的实用价值。

Abstract:To study the polymorphism at D7S21 locus in Hebei Han population,124 unrelated individuals were detected rapidly by Minisatellite Variant Repeat-Polymerase Chain Reaction (MVR-PCR) and polyacrylamide gradient gel electrophoresis followed by silver staining,and digital codes were obtained.About 36 digital codes were obtained from each individual.No two unrelated individuals shared the same codes.The probability of identity in 36 digital codes was 3.48×10^{-18} .The percentage of three repeat units,a-type,t-type and 0-type was 48.5%,49.4% and 2.1% respectively.The heterozygosity (H),excluding probability of paternity (EPP) and polymorphism information content (PIC) were 0.9876,0.9746and 0.9872 respectively.The results suggested that D7S21 locus has highly polymorphism in Hebei Han population.The method-polyacrylamide gradient gel electrophoresis followed by silver staining was simple,rapid and practical.

关键词 [D7S21基因座](#) [小卫星变异重复序列](#) [数字编码](#) [个人识别](#) **Key words** [D7S21 locus](#) [MVR](#) [digital code](#) [individual identification](#)

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