

4个Y-STR基因座银染复合扩增 Four Y-STR Multiplex System by Silver Staining

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摘要 建立一个复合扩增体系, 同时扩增DYS391、GATA-A4、GATA-A10和GATA-H4 4个Y染色体特异性的STR基因座, 并用聚丙烯酰胺凝胶电泳和银染显色技术进行基因分型。采用该复合扩增系统调查广东汉族311名无关男性个体的单倍型频率, 这4个基因座分别检出5、7、6和5个等位基因, 其基因多样性分别为0.4623、0.6972、0.7173、0.6015。共检出98种单倍型, 单倍型基因多样性为0.9755。该复合扩增体系在建立Y染色体STR数据库, 研究群体遗传和进行法医学鉴定有重要意义。

Abstract: A multiplex PCR system has been developed to amplify 4 Y-chromosome specific short tandem repeats (STR), DYS391, GATA-A4, GATA-A10 and GATA-H4, simultaneously. PCR products were separated by polyacrylamide gels electrophoresis followed by silver stain. When 311 unrelated males from the Han population in Guangdong were detected by the multiplex system, DYS391, GATA-A4, GATA-A10 and GATA-H4 showed 5, 7, 6 and 5 alleles respectively. Total 98 haplotypes could be identified. Gene diversity value for the 4 STR was 0.4623, 0.6972, 0.7173 and 0.6015 respectively. The gene diversity value for the haplotypes of the 4 Y-STR reached 0.9755. The four Y-STR multiplex system will be very powerful for establishing Y-STR database, exploring human origin, paternity testing and personal identification.

关键词 [复合扩增](#) [Y染色体](#) [短串联重复](#) [遗传多态性](#) **Key words** [multiplex amplification](#) [Y-chromosome short tandem repeat](#) [genetic polymorphism](#)

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