

研究报告

拉萨市藏族人群15个STR基因座多态性的研究

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摘要

利用多重PCR和五色荧光(6FAM、VIC、NED、PET、LIZ)自动化检测技术调查西藏自治区拉萨市藏族人群D8S1179、D21S11、D7S820、CSF1P0、D3S1358、TH01、D13S317、D16S539、D2S1338、D19S433、VWA、TPOX、D18S51、D5S818、FGA共15个STR基因座多态性分布, 获得了15个STR基因座的遗传学数据。结果显示: 15个STR基因座的基因型分布符合Hardy-Weinberg平衡。15个STR基因座的个体鉴别力(DP)在0.7515~0.9599之间, 杂合度(H)在0.5576~0.8538之间, 多态信息含量(PIC)在0.5455~0.8458之间, 非父排除率(EPP)在0.3755~0.8520之间, 累积个体鉴别力为0.99999999, 累积非父排除率为0.999999997。15个STR基因座适合作为藏族人群的遗传标志用于人类学、遗传疾病连锁分析、法医学亲子鉴定和个体识别等研究领域。

关键词 [短串联重复序列](#) [多态性](#) [藏族](#) [聚合酶链式反应](#)

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Genetic Polymorphism of 15 STR Loci in a Lhasa Tibetan Population

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Abstract

<P>The polymorphism distributions of 15 STR loci (D8S1179, D21S11, D7S820, CSF1P0, D3S1358, TH01, D13S317, D16S539, D2S1338, D19S433, VWA, TPOX, D18S51, D5S818 and FGA) were investigated in a Lhasa Tibetan population by multiplex PCR amplification using five fluorochromes (6FAM, VIC, NED, PET, LIZ). Gene frequency, discrimination power (DP), heterozygosity (H), polymorphism information content (PIC) and probability of paternity exclusion (EPP) were calculated, and all loci were tested for Hardy-Weinberg equilibrium. Results indicate that the gene frequency of these 15 STR loci is in Hardy-Weinberg equilibrium. The DP is at 0.7515—0.9599, H is at 0.5576—0.8538, PIC is at 0.5455—0.8458, and EPP is at 0.3755—0.8520. Cumulative DP of the 15 STR is 0.99999999, and cumulative EPP is 0.999999997. Therefore, these 15 STR loci can be used as genetic markers of in Lhasa Tibetan populations in anthropological studies, linkage analysis of genetic diseases, individual identification and paternity testing in forensic medicine.</P>

Key words [short tandem repeat \(STR\)](#) [polymorphism](#) [tibetan](#) [polymerase chain reaction \(PCR\)](#)

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