

研究报告

云南纳西族10个X-STR基因座遗传多态性研究

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摘要

为研究云南纳西族人群10个位于X染色体的短串联重复序列基因座及单倍型的遗传多态性, 采用PCR扩增, 变性聚丙烯酰胺凝胶电泳结合银染显色分型技术, 对98名云南纳西族无关男性个体X染色体的10个STR基因座进行基因分型。结果显示, 98名无关男性个体中, DXS7423、DXS7424、DXS6799、DXS7133、DXS6804、DXS8378、HPRTB、DXS7130、DXS7132 和DXS6789分别检出4、7、6、3、6、5、5、7、6和8个等位基因, 等位基因频率分布在0.0102 (DXS7132、DXS6789)~0.7347 (DXS7133) 之间。由DXS8378与DXS7130基因座组成的单倍型共检出20种, 由DXS6789、DXS6799和DXS7424基因座组成的单倍型共检出56种, 单倍型多样性分别为0.8553和0.9649, 说明所选的10个X-STR位点有较高的多态性信息, 在基因组多样性研究、法医学个体识别、亲权鉴定中具有重要应用价值。

关键词 [X染色体](#) [短串联重复序列](#) [遗传多态性](#) [单倍型](#) [中国纳西族](#)

分类号

Genetic polymorphism of ten X-STR loci in naxi population

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Abstract

<P>We studied the genetic polymorphism and haplotypes of ten short tandem repeats (STR) loci on the X chromosome in Yunnan Naxi population. Genotyping and detection of PCR products from the ten X-STRs were carried out on denaturing polyacrylamide gel electrophoresis followed by silver staining. The results revealed that among 98 males from Yunnan Naxi population, the number of alleles in the 10 loci (DXS7423, DXS7424, DXS6799, DXS7133, DXS6804, DXS8378, HPRTB, DXS7130, DXS7132 and DXS6789) were 4, 7, 6, 3, 6, 5, 5, 7, 6 and 8, respectively. Gene frequencies ranged from 0.0102 (DXS7132 and DXS6789) to 0.7347 (DXS7133). A total of 20 haplotypes were detected in DXS8378 and DXS7130 loci, and 56 haplotypes were detected in DXS6789, DXS6799 and DXS7424 loci. The haplotype diversity reached 0.8553 and 0.9649, respectively. In conclusion, the 10 X-STR loci are relatively abundant in polymorphic information for forensic identification, paternity testing and for genetic population studies.</P>

Key words [X-chromosome](#) [short tandem repeat](#) [genetic polymorphism](#) [haplotype](#) [Chinese Naxi population](#)

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