

# 近交系小鼠微卫星DNA多态性的研究 Microsatellite DNA Polymorphisms in Inbred Strain Mice

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**摘要** 随机选择位于小鼠不同染色体上的微卫星引物42对, 用PCR技术对C3H、C57、BALB/c、DBA、TA2、T739、B615、BACB/c-nu-nu和SCID等9种实验室常用近交系小鼠微卫星DNA多态性进行了研究。结果显示有信息的40对引物中, 9种近交系小鼠在各基因座上均出现一条清晰条带, 28个基因座表现为多态性。其中D3Mit22、D7Nds1、D11Mit12、D12Nds2、D15Mit17、D16Mit3、D16Mit4基因座表现为显著多态性。T739、B615和TA2的遗传背景相近, 其相似系数分别为90%和85%; 其次为TA2、SCID和B615, 其相似系数分别为80%和82.5%。结果表明所检测的小鼠符合近交要求, 筛选出的引物能典型地反映9个近交系小鼠的品系特异性和遗传背景, 可用于常规检测小鼠品系来源和遗传背景等。

**Abstract:** Forty-two microsatellites DNA loci on different chromosomes in nine kinds of inbred strain mice including C3H, C57, BALB/c, DBA, TA2, T739, B615, BALB/c-nu-nu and SCID were investigated by PCR analysis. It showed that all these mice tested display single allelic gene band with forty pairs of informative primers. Twenty-eight loci are polymorphisms, among which the polymorphisms of D3Mit22, D7Nds1, D11Mit12, D12Nds2, D15Mit17, D16Mit3, and D16Mit4 loci are significant. The genetic background of T739 was similarity with that of B615 and TA2, the similarity indices were 90% and 85% respectively; and that of TA2 was similarity with SCID and B615, the similarity indices were 80% and 82.5%. These results suggest that these mice tested meet the request of inbred strain. Screened primers showing marked polymorphisms typically reflect the speciality of strains and genetic backgrounds, which could be used in determining the strains origin and genetic background of mice.

**关键词** [微卫星DNA](#) [近交系小鼠](#) [遗传检测](#) **Key words** [microsatellite DNA](#) [inbred strain mice](#) [genetic monitoring](#)

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## Abstract

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