

## 山羊生长激素基因5'调控区的多态性分析

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**摘要** 以鲁北白山羊、引进波尔山羊、纯繁波尔山羊以及鲁北白山羊与波尔山羊的杂交一代、回交一代共计274个个体为研究材料, 用两对引物分别扩增山羊生长激素(GH)基因5'区的26-239bp以及225-429bp片段, 扩增产物经SSCP分析发现均存在多态性。在26-239bp片段上, 波尔山羊及杂交后代以AA型个体占多数, 而鲁北白山羊则BB型个体较多; 在225-429bp片段上, 所有种群均以CC型个体较多。对两个片段的纯合型(AA, BB; CC, DD)分别克隆测序发现: (1) 26-239bp片段上AA型在第60位发生了C→T的突变, 第211位发生碱基C的丢失, (2) 225-429bp片段上, DD型存在3处突变, 分别为264位由T→C, 292位由T→A, 372位由C→T。上述结果为首次实验证实山羊生长激素5'调控区存在序列多态性。

**关键词** [山羊](#) [生长激素基因](#) [PCR-SSCP](#) [遗传多态性](#)

分类号

## Polymorphism Analysis of the Goat Growth Hormone Gene in the 5' Regulatory Sequence

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### Abstract

The polymorphism of goat growth hormone gene in 5'-region in 274 goats including Lubei white goat, introduced Boer goat, pure bred Boer goat, hybrid generation 1 of LuBei white goat and Boer goat, backcross of hybrid generation 1 and Boer goat were detected by PCR-SSCP with two different pairs of primers. The result showed that in 26-239bp most of the Boer goats and hybrid generation presented as AA genotype, while most LuBei white goats presented as BB genotype. In 225-429bp all breeds presented as more CC genotype. The amplified fragments of AA, BB and CC, DD of the two fragments were cloned and sequenced. The result showed that in 26-239bp AA genotype had one substitution mutation at 60 site (C→T), and base C losing at 211 site and DD genotype had three substitution mutations at 264 site (T→C), 292 site (T→A) and 372 site (C→T) in 225-429bp. The results above-mentioned first confirmed that there were polymorphisms in 5'-region of GH gene.

**Key words** [goat](#) [growth hormone gene](#) [PCR-SSCP](#) [genetic polymorphism](#)

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