

研究报告

5个山羊品种CSN1S2基因的Alw26I酶切

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摘要 利用PCR-RFLP技术对西农萨能奶山羊、关中奶山羊、陕南白山羊、安哥拉山羊和波尔山羊5个山羊品种的170个个体的 α_s 2酪蛋白(CSN1S2)基因进行多态性分析, 结果表明: 扩增大小为310 bp的片段经限制性内切酶Alw26I酶切后表现多态, 且5个山羊品种该基因座位均处于Hardy-Weinberg平衡状态。西农萨能奶山羊、关中奶山羊、陕南白山羊、安哥拉山羊和波尔山羊的基因杂合度/有效等位基因数/Shannon信息熵/PIC值分别为0.1589/1.1889/0.2955/0.1463, 0.4114/1.6981/0.6017/0.5171, 0.1653/1.1980/0.3046/0.1516, 0.0646/1.0691/0.1463/0.0625, 0.0541/1.0572/0.1270/0.0526。分析结果显示, 关中奶山羊的遗传多样性最丰富, 表现为高度多态; 其次是西农萨能奶山羊和陕南白山羊, 而安哥拉山羊和波尔山羊的遗传变异程度最低。

关键词 [山羊](#); [CSN1S2 基因](#) [PCR-RFLP](#) [多态性](#)

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Polymorphism Analysis of the CSN1S2 Gene digested with Alw26I in Five Goat Breeds

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Abstract

PCR-RFLP was applied to analyze the polymorphism of CSN1S2 gene in 170 goats that comprised of five goat breeds, namely Xinong Saanen dairy goat, Guanzhong dairy goat, Shaannan white goat, Angora goat and Boer goat. A 310 bp -long PCR product was digested with Alw26I and demonstrated polymorphism in five goat populations that were all at Hardy-Weinberg equilibrium ($P>0.05$). For Xinong Saanen dairy goat, Guanzhong dairy goat, Shaannan white goat, Angora goat and Boer goat, gene heterozygosity/effective allele gene number/Shannon information entropy /Polymorphism information content were 0.1589/1.1889/0.2955/0.1463, 0.4114/1.6981/0.6017/0.5171, 0.1653/1.1980/0.3046/0.1516, 0.0646/1.0691/0.1463/0.0625, 0.0541/1.0572/0.1270/0.0526, respectively. According to the heredity diversity indexes described above of the five goat breeds, Guanzhong dairy goat had the most abundant heredity diversity and showed high polymorphism, and Xinong Saanen dairy goat and Shaannan white goat were inferior, while Angora goat and Boer goat had the lowest genetic variability.

Key words [goat](#) [CSN 1S2 gene](#) [PCR-RFLP](#) [polymorphism](#)

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