

研究报告

## 牛 *HTR1B* 基因的分子遗传特性研究

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收稿日期 2006-8-30 修回日期 2006-9-25 网络版发布日期 2007-5-8 接受日期

### 摘要

用PCR-SSCP技术研究了涉及肉牛和奶牛共计7品种*HTR1B*基因的编码区和3'侧翼区的多态性, 以期为牛性情的标记辅助选择积累数据。扩增得到4个片段, 有3个片段存在(SSCP)多态性。对不同的SSCP带型对应片段进行测序, 共发现6个SNP多态位点(G205T、C507T、C546G、C744T、G816A和G942A)。各遗传群体内G205T、C744T、G816A和G942A位点均处于Hardy-Weinberg平衡, 而C507T和C546G位点只有鲁西牛处于Hardy-Weinberg平衡。奶牛205T等位基因频率显著高于其他肉牛品种( $\chi^2 = 6.87$ )。奶牛G205T位点多态信息含量为0.25, 其余各位点在不同群体内均小于0.10, 说明牛*HTR1B*基因较保守。

关键词 [HTR1B基因](#) [PCR-SSCP](#) [SNP](#) [牛](#)

分类号

## Molecular genetic characteristic of bovine *HTR1B* gene

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### Abstract

<P>The aim of the present study was to identify and characterize polymorphisms within the coding region and the 3' flanking region of the bovine serotonin receptor 1B gene among different cattle breeds. Four DNA fragments were amplified by polymerase chain reaction and then used for polymorphism identification by SSCP. The fragments showing different SSCP patterns were sequenced. And a total of six SNPs (G205T, C507T, C546G, C744T, G816A and G942A) were detected. The SNPs were at Hardy-Weinberg equilibrium except C507T and C546G in all genetic population. The frequencies of allele 205T of Holstein were much higher than that of the other six beef cattle populations. Almost the *PIC* of all SNPs were not more than 0.10 except that of G205T in Holstein cows, which indicated the bovine *HTR1B* gene was conserved.</P>

Key words [HTR1B gene](#) [PCR-SSCP](#) [SNPs](#) [bovine](#)

DOI: 10.1360/yc-007-0565

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