

研究报告

## 哺乳动物DMRT1基因调控区分析

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**摘要** dmrt1基因是迄今为止发现的第一个在种属间具有进化保守性的性别分化基因。该基因在哺乳动物的性别分化过程中发挥着重要作用。通过对哺乳动物dmrt1基因5'端和3'端调控区的分析,发现它们分别存在3个和7个同源性较高(> 60%)的保守区。PCR扩增得到该基因的启动子、3'端调控区及编码区,并构入表达载体转染COS-7和ST细胞,结果显示,克隆的5'端和3'端调控区都能有效引导报告基因gfp以及dmrt1基因的表达,但表达效率在不同细胞中存在较大差异,表明dmrt1的表达存在着细胞特异性及复杂的调控机制。

**关键词**

[性别分化](#); [dmrt1基因](#); [启动子](#); [3'端调控区](#)

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## Analysis of regulatory regions of mammalian DMRT1 genes

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### Abstract

dmrt1 is the first conserved gene found among animal phyla for sexual development, which is important for mammalian sexual differentiation. Sequence analysis showed that there were three and seven conserved regions (>60%) for dmrt1 5' and 3' flanking sequences respectively. dmrt1 promoter, 3' flanking region and coding sequence were amplified, cloned into expression vectors and transfected into COS-7 and ST cells respectively. The results indicated that both 5' and 3' flanking sequences cloned can direct expression of gfp and dmrt1. However difference of expression efficiency was obvious between different cells. These results indicated regulation of dmrt1 expression was cell-specific and there was a complex regulatory mechanism involved in expression of this gene.

**Key words** [sexual differentiation](#) [dmrt1 gene](#) [promoter](#) [3'regulatory region](#)

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