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研究报告

黄鳝性腺高表达的核糖体蛋白基因Rribosomal Protein Genes Highly Expressed in Swamp Eel Gonads

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摘要

采用高密点阵技术从黄鳝雄性性腺cDNA文库中获得8个克隆，序列分析和BLAST结果显示它们编码的蛋白质分别与40S核糖体蛋白S4,S9,S16,S17,S20和60S核糖体蛋白L7, L18a,L29高度同源。 根据黄鳝RP蛋白序列和其他物种的相应同源序列构建ML系统发生树，显示核糖体蛋白基因在进化中高度保守。核糖体蛋白基因不仅可作为分子进化分析的有利工具，而且从它们的表达模式显示RP基因除具有看家基因的功能外，很有可能参与包括性腺分化等过程的发育调控。Abstract: 8 cDNA clones have been isolated from a cDNA library prepared from swamp eel testies by macroarray. DNA sequence analysis and database search showed that they encode 8 proteins which are highly homologous to 40S ribosomal proteins S4,S9,S16,S17,S20 and 60S riobosomal proteins L7, L18a,L29. Phylogenetic trees (ML) based on ribosomal protein genes from swamp eel and other organisms has been reconstructed, which showed that ribosomal protein genes were highly conserved during evolution. These results suggested that ribosomal protein genes as house keeping genes may play roles in developmental regulation such as sexual differentiation and can also be used as markers for the study of molecular evolution.

关键词 核糖体蛋白 黄鳝 性别决定 Key words ribosomal protein swamp eel sex determination
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Abstract

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