

研究报告

## 猪骨骼肌快肌肌钙蛋白C2基因的cDNA克隆与表达分析

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收稿日期 2006-1-12 修回日期 2006-3-23 网络版发布日期 2006-8-8 接受日期

**摘要** 从人骨骼肌快肌肌钙蛋白C2 (TNNC2) 基因出发, 在dbEST数据库中进行同源性搜索, 找到一个有较高同源性且在猪背最长肌中表达EST (BM083186)。通过电子克隆和进一步RT-PCR实验验证, 获得猪TNNC2基因全长cDNA序列, 其全长843bp, 开放阅读框为201~683bp, 编码有160个氨基酸。同源性分析结果表明, 与人、鼠的骨骼肌快肌肌钙蛋白C2基因cDNA编码区 (CDS) 同源性分别为93.6%、90.5%, 蛋白序列同源性均为97.5%。多种组织的半定量RT-PCR研究表明, 该基因在骨骼肌中表达, 并且在杜洛克猪背最长肌中的表达比兰塘猪高。

**关键词** [猪](#) [骨骼肌快肌肌钙蛋白C2基因](#) [电子克隆](#)

**分类号** [Q343](#)

## Cloning and Expression of the Pig Fast Skeletal Muscle Troponin C Gene

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### Abstract

<P>A pig skeletal muscle expressed sequence tag (EST, accession number BM083186) was found to encode amino acid sequences with high homology to human TNNC2. In silico cloning obtained a 843 bp sequence which we named pig fast skeletal troponin C gene (TNNC2). The open reading frame of TNNC2 was between nucleotides 201~683, and was confirmed by RT-PCR. The gene encoded a 160 amino acid residue protein and had the highest similarity with human and mouse homologues, with percent identities being 93.6%, 90.5%, respectively. Semi-quantitative RT-PCR analysis of mRNA from different normal tissues indicted that the TNNC2 gene was expressed in the skeletal muscle and the levels of expression were higher in the longissimus dorsi of the Duroc pig than in the same tissue of the Lantang pig.</P>

**Key words** [pig](#) [fast skeletal muscle troponin C gene](#) [in silico cloning](#)

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