

筛选代表小鼠植入前胚胎紧密化相关基因的EST Identification of ESTs of Genes Related to Compaction in Preimplantation Embryos of Mouse

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摘要

分别收集181及241枚昆明白小鼠8细胞早期胚胎及8细胞紧密化胚胎, 采用SMART PCR方法直接合成胚胎双链cDNA。进而运用抑制消减杂交技术 (SSH) 对8细胞早期胚胎及8细胞紧密化胚胎的基因表达进行研究, 并将所获得的差异表达产物按片段大小分段分离纯化后克隆入pUCm-T载体中, 经PCR鉴定后挑选阳性克隆进行测序, 筛选出27个代表8细胞早期胚胎和紧密化8细胞胚胎差别表达基因的cDNA片段; 经与GenBank中收录的序列进行同源性匹配分析, 证实其中17个cDNA片段为新的EST, 提交GeneBank后被接受并给予了新序列编号。这17个片段均可能为与紧密化密切相关的新基因的表达片段, 为进一步克隆新的紧密化相关基因的全长cDNA及后续新基因的结构和功能研究打下基础。通过采用不同长度大小片段分别克隆的方法, 可获得较长片段的EST, 避免差异表达大片段的丢失。

Abstract: A total of 181 8-cell embryos and 241 8-cell compacted embryos were collected respectively from Kunmingbai mouse and their cDNA was synthesized directly using SMART PCR. Genes, which expressed differently between early 8-cell embryos and 8-cell compacted embryos, were investigated using the method of suppression subtractive hybridization (SSH). Then PCR production was cloned into pUCm-T vector respectively according to the size after isolated and purified. Twenty-seven ESTs (expressed sequence tags) of genes expressed differently between early 8-cell embryos and 8-cell compacted embryos have been isolated and cloned. seventeen of those were novel ESTs after being confirmed by blaster matching in GenBank for homology analysis. And they were banked into GenBank with accession numbers. All 17 ESTs might be for novel genes related to compaction in compacted embryos. And longer ESTs may be obtained by cloning according to the size.

关键词 [植入前](#) [紧密化](#) [抑制消减杂交](#) [差异表达](#) [小鼠](#) Key words [preimplantation embryo](#) [compaction](#) [suppression subtractive hybridization](#) [differential expression](#) [mouse](#)

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