عنوان مقاله:
Bacterial expression of preprochymosin cDNA in E. coli

محل انتشار:
چهارمین همایش ملی بیوتکنولوژی ایران (سال: 1384)

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خلاصه مقاله:
Chemosin (Rennin EC 3.4.23.4), an aspartyl proteinase, is the major proteolytic enzyme in the fourth stomach of the unweaned calf, and it is formed by proteolytic activation of its zymogen, prochymosin. Following the cloning of synthesized cDNAs on mRNA pools extracted from the mucosa of the calf fourth stomach, we have identified an alternatively spliced from of preprochymosin cDNA (AS6preprochemosin). Sequencing data analusis showed that the exon six has been spliced out and, therefore the gene product is 114 bp shorter in length. Im order to determine the biological significance of the AS6preprochemosin, we expressed the encoding cDNA together with a complete chemosin cDNA in E.coli. Under the same expression condition, we found at least a 5-fold higher expression of AS6preprochemosin protein in comparison to a full-length recombinat chemosin. Protein prediction program analusis showed that the missing exon contain group of amino acids with high hydropgobicity score. Therefore، the deletion of this exon may explain the higher expression of the recombinant product in E.coli.

کلمات کلیدی:
chymosin , gene expression , E.coli