

Active Recombinant Human Chymase 1, Mast Cell

Cat. No. CMA1-722H Lot. No. (See product label)

SPECIFICATION

Product Overview

Species Human

Source P.pastoris

Description

Chymase is an enzyme that in humans is encoded by the CMA1 gene. This gene product is a chymotryptic serine proteinase that belongs to the peptidase family S1. It is expressed in mast cells and thought to function in the degradation of the extracellular matrix, the regulation of submucosal gland secretion, and the generation of vasoactive peptides. In the heart and blood vessels, this protein, rather than angiotensin converting enzyme, is largely responsible for converting angiotensin I to the vasoactive peptide angiotensin II. Angiotensin II has been implicated in blood pressure control and in the pathogenesis of hypertension, cardiac hypertrophy, and heart failure. Thus, this gene product is a target for cardiovascular disease therapies. This gene maps to 14q11.2 in a cluster of genes encoding other proteases.

Application

Chymase has been implicated in generation of angiotensin II and cleavage of big endothelin. Studies indicate it may be involved in vascular proliferation, myocardial infarction and dermatitis.

Unit Definition

One unit hydrolyzes one micromole of N-benzoyl-L-tyrosine ethyl ester (BTEE) per minute at pH 7.8 and 25 °C. The assay buffer used to determine the enzyme activity contains 27 mM Tris-HCl, pH 7.8, with 150 mM NaCl and 0.43 mM BTEE.

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Physical Form	Supplied as a solution in 20 mM Tris, 0.8 M NaCl and 25% glycerol, pH 7.6.
Activity	≥40 units/mg protein.
EQP Level	Premium.
Storage Temp	-20°C.
GENE INFORMATION	
Gene Name	CMA1 chymase 1, mast cell [Homo sapiens]
Synonyms	chymase 1, mast cell; CYH; MCT1; chymase; MGC119890; MGC119891; CMA1; chymase; alpha-chymase; chymase, heart; chymase, mast cell; mast cell protease I; chymase 1 preproprotein transcript E; chymase 1 preproprotein transcript I; Mast cell protease I; CYM; Alpha-chymase; EC 3.4.21.39
Gene ID	1215
mRNA Refseq	NM_001836
Protein Refseq	NP_001827
MIM	118938
UniProt ID	P23946
Chromosome Location	14q11.2
Pathway	Renin-angiotensin system

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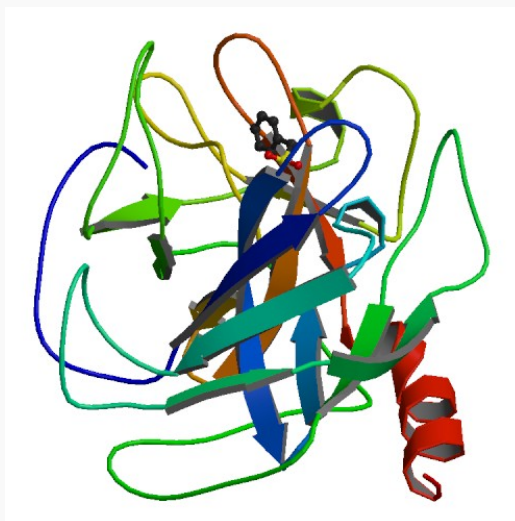
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Function

peptidase activity; serine-type endopeptidase activity; serine-type peptidase activity

PDB rendering based
on 1klt.



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