

Chymase from Human, Recombinant

Cat. No. NATE-0817

Lot. No. (See product label)

Introduction

Description

Chymases are a family of serine proteases found primarily in mast cells, though also present in basophil granulocytes (e.g. alpha chymase mcpt8). They show broad peptidolytic activity and are involved in a variety of functions. For example, chymases are released by mucosal mast cells upon challenge with parasites and parasite antigens promoting an inflammatory response. Chymases are also known to convert angiotensin I to angiotensin II and thus play a role in hypertension and atherosclerosis. Because of its role in inflammation it has been investigated as a target in the treatment of asthma.

Applications

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. Human chymase has been used in a study to assess the effects of Panax notoginseng flower extract on the TGF- β /Smad signal transduction pathway in heart remodeling. Human chymase has also been used in a study to investigate the blood glucose level and survival in streptozotocin-treated human chymase transgenic mice.

Synonyms

mast cell protease I; skeletal muscle protease; skin chymotryptic proteinase; mast cell serine proteinase, chymase; skeletal muscle (SK) protease; chymase; EC 3.4.21.39; 97501-92-3

Product Information

Species

Human

Source

Pichia pastoris

Form

Supplied as a solution in 20 mM Tris, 0.8 M NaCl and 25% glycerol, pH 7.6.

EC Number

EC 3.4.21.39

CAS No.

97501-92-3

Molecular Weight

~30 kDa

Purity

>90% (SDS-PAGE)

Activity

>40 units/mg protein

Concentration

125-400 μ g/ml

Optimum pH

7.5-9.0

Inhibitors

soybean trypsin inhibitor, phenylmethylsulfonyl fluoride and chymostatin

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.

Storage and Shipping Information

Storage

Store at -20°C

