Native Human Tryptase

Cat. No. NATE-0725

Lot. No. (See product label)

Introduction

Description	Tryptase is a member of the serine protease S1 family. It is the predominant neutral protease of the mast cell granules. Within the mast cell granule it exists as a heparin-stabilized active tetramer. Stabilization is a result of the high negative charge density of the glycosaminoglycan. This stabilization activity is observed with heparins with a MW > 6 kDa as well as other glycosaminoglycans such as dextran sulfate or chondroitin sulfates. Removal of heparin results in dissociation of the tetramer and inactivation of the enzyme. High concentrations of NaCl will result in the dissociation of heparin.
Applications	Tryptase has been used in a study that purified and characterized recombinant rat mast cell protease 7 expressed in Pichia pastoris. Tryptase has also been used in a study to investigate drug allergies in mast cell disease.
Synonyms	tryptase; mast cell tryptase; mast cell protease II; skin tryptase; lung tryptase; pituitary tryptase; mast cell neutral proteinase; mast cell tryptase; mast cell neutral proteinase; mast cell serine proteinase II; mast cell proteinase II; mast cell serine proteinase tryptase; rat mast cell protease II; tryptase M; EC 3.4.21.59

Product Information

Species	Human
Source	Human lung
Form	buffered aqueous solution, solution in 1 M NaCl, 50 mM sodium acetate, pH 5.0, containing 0.01% sodium azide
EC Number	EC 3.4.21.59
CAS No.	97501-93-4
Molecular Weight	Molecular Weight: ~135 kDa (Human) (Non-covalently linked tetramer with two sets of dissimilar subunits possibly resulting from heterogeneity in N-linked glycosylation and existence of a & b isoforms sequences in human lung). 31-33 kDa (Monomer MW)
Activity	> 5 units/mg protein
Pathway	Activation of Matrix Metalloproteinases, organism-specific biosystem; Degradation of the extracellular matrix, organism-specific biosystem; Extracellular matrix organization, organism-specific biosystem
Function	peptidase activity; protein binding; serine-type endopeptidase activity; serine-type peptidase activity; peptidase activity; serine-type endopeptidase activity; serine-type peptidase activity; serine-type endopeptidase activity; serine-type peptidase activity; peptidase activity; serine-type endopeptidase activity; serine-type peptidase activity
Unit Definition	One unit will hydrolyze 1.0 µmole of N-benzoyl DL-arginine p-nitroanilide per minute at pH 7.8 at 37°C.

Storage and Shipping Information

Storage	−20°C