

Native Human Elastase

Cat. No. NATE-0213

Lot. No. (See product label)

Introduction

Description

Neutrophil elastase is a serine proteinase in the same family as chymotrypsin and has broad substrate specificity. Secreted by neutrophils and macrophages during inflammation, it destroys bacteria and host tissue. It also localizes to Neutrophil extracellular traps (NETs), via its high affinity for DNA, an unusual property for serine proteases.

Applications

Elastase from Creative Enzymes has been used to digest fibronectin. The results were compared with fibronectin digestion by crude human leukocyte homogenate to examine the presence of fibronectin peptides in saliva of patients with Sjögren's syndrome. It has also been used as a reference to determine the elastase activity in cell lysates. This study examined the effect of all-trans retinoic acid on procoagulant and fibrinolytic activities of cultured blast cells. These blast cells were from patients with acute promyelocytic leukemia. Elastase from human leukocytes has been used in a study that determined that fragments of Nle3-angiotensin (1-7) accelerate healing in dermal models.

Synonyms

ELANE; elastase; EC 3.4.21.37; leukocyte elastase; ELA2; elastase 2; neutrophil elastase; serine elastase; lysosomal elastase; neutrophil elastase; polymorphonuclear leukocyte elastase; elaszyn; granulocyte elastase

Product Information

Species

Human

Source

Human leukocytes

Form

Lyophilized from 0.05 M sodium acetate (pH 5.5) and 0.6 M NaCl

EC Number

EC 3.4.21.37

CAS No.

9004-06-2

Molecular Weight

29 kDa

Activity

> 50 units/mg protein (Bradford)

Isoelectric point

8.77-9.55

Pathway

Activation of Matrix Metalloproteinases, organism-specific biosystem; C-MYB transcription factor network, organism-specific biosystem; Degradation of the extracellular matrix, organism-specific biosystem; Extracellular matrix organization, organism-specific biosystem; Systemic lupus erythematosus, organism-specific biosystem; Systemic lupus erythematosus, conserved biosystem; Transcriptional misregulation in cancer, organism-specific biosystem

Function

bacterial cell surface binding; cytokine binding; endopeptidase activity; heparin binding; peptidase activity; protease binding; protein binding; serine-type endopeptidase activity

Unit Definition

One unit will release one nanomole of p-nitrophenol per sec from Boc-L-alanine p-

Unit Definition

One unit will release one nanomole of p-nitrophenol per sec from DCC-L-alanine p-nitrophenyl ester at pH 6.5 at 37°C.

Storage and Shipping Information

Storage −20°C