Active Native Human Sputum Leucocyte Elastase

Cat. No. Elastase-01H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Native Human Elastase from Leucocytes of Purulent Human Sputum.
Species	Human
Source	Leucocytes
Description	Elastase is an enzyme belonging to the serine proteases family, which comprises hydrolases that break down peptide bonds.
Form	Lyophilized, salt-free, soluble powder.
Bio-activity	1). Using Suc-Ala-Ala-Ala-pNA (EPC No. NS945); 800-900 units per mg of protein; one unit will hydrolyze 1 nM of substrate per minute at pH 7.5 and 25 centigrade. 2). Using MeO-Suc-Ala-Ala-Pro-Val-pNA (EPC No. FH237); 16-18 units per mg of protein; one unit will hydrolyze 1 μM of substrate per minute at pH 7.5 and 25 centigrade. Assay procedures are given in Methods.
Molecular Mass	29.5 kDa
Purity	Greater than 95% by SDS-PAGE. Purulent human sputum is fractionated with NaCl and treated with DNase to release DNA-bound proteins. The elastase is purified by affinity chromatography on Agarose-DAPSA-Elastin Soluble and separated from cathepsins by ion exchange chromatography on carboxymethyl-agarose. The elastase is further purified by affinity chromatography at -15 centigrade on agarose-alanyl-alanyl-alanine. The elastase is

Tel: 1-631-559-9269 1-516-512-3133
Email: info@creative-biomart.com Fax: 1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA

	free of cathepsin G activity when assayed with Suc-Ala-Ala-Pro-Phe-pNA. The elastase from purulent human sputum was reported to possess similar enzymatic, inhibitory and physical chemical properties as elastase from human leucocytes.
Stability	Stable one year. Stability is better in acidic (~pH 5) than basic buffers. Inactivation may occur at pH 8.0 due to autolysis and/or proteolysis by trypsin such as bovine pancreatic trypsin. Proteolysis can be inhibited by benamidine. Autolysis and proteolysis can be inhibited by elastatinal. However, elastatinal is also an inhibitor of elastase. Low pH (~5) protects the elastase from both autolysis and proteolysis.
Storage	Store at 5 centigrade.
Dilutions	1. 1 mg/mL in 0.05 M NaOAc pH 5 containing 0.1 M NaCl. Stable 7 days at 5 centigrade (in ice). 2. 10 mg/mL in 50% glycerol 50% 0.02 M NaOAc pH 5. Stable at least 60 days at -20 centigrade with 20 cycles between -20 and 5 centigrade. 3. May be dissolved at 10 mg/mL in 2 mM HoAc and re-lyophilized in smaller quantities.

GENE INFORMATION

Official Symbol	Elastase
Synonyms	EC 3.4.21.37; Elastase

Tel: 1-631-559-9269 1-516-512-3133
Email: info@creative-biomart.com Fax: 1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA