ELANE Protein, Human (GST)

Cat. No.:	HY-P72179
Synonyms:	Bone marrow serine protease; ELA2; ELANE; Elastase 2; Elastase 2 neutrophil; Elastase neutrophil expressed; Elastase-2; ELNE_HUMAN; GE; Granulocyte derived elastase; HLE; HNE; Human leukocyte elastase; Leukocyte elastase; Medullasin; NE; Neutrophil elastase; PMN E; PMN elastase; Polymorphonuclear elastase; SCN1
Species:	Human
Source:	E. coli
Accession:	P08246 (I30-H267)
Gene ID:	1991
Molecular Weight:	Approximately 52.6 kDa

PROPERTIES

AA Sequence	I V G G R R A R P H A W P F M V S L Q L R G G H F C G A T L I A P N F V M S A A H C V A N V N V R A V R V V L G A H N L S R R E P T R Q V F A V Q R I F E N G Y D P V N L L N D I V I L Q L N G S A T I N A N V Q V A Q L P A Q G R R L G N G V Q C L A M G W G L L G R N R G I A S V L Q E L N V T V V T S L C R R S N V C T L V R G R Q A G V C F G D S G S P L V C N G L I H G I A S F V R G G C A S G L Y P D A F A P V A Q F V N W I D S I I Q R S E D N P C P H P R D P D P A S R T H
Biological Activity	1.The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet. 2.Measured by its ability to cleave the fluorogenic peptide substrate, MeOSuc-Ala-Ala-Pro-Val-7-amido-4-methylcoumarin (MeOSuc-AAPV-AMC). The specific activity is 1776.266 pmol/min/µg, as measured under the described conditions.
Appearance	Lyophilized powder
Formulation	Lyophilized from a 0.2 µm solution of 10 mM Tris-HCl, 1 mM EDTA, 6% Trehalose, pH 8.0.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH_2O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	ELANE, a serine protease, plays a crucial role in modulating the functions of natural killer cells, monocytes, and granulocytes. It acts by inhibiting C5a-dependent neutrophil enzyme release and chemotaxis, highlighting its regulatory role

in immune responses. Additionally, ELANE participates in the inhibition of pyroptosis by promoting the cleavage of GSDMB, showcasing its involvement in the regulation of programmed cell death. Notably, ELANE exhibits bactericidal activity by effectively killing E. coli in vitro, while sparing S. aureus. This antimicrobial effect is attributed to its ability to digest outer membrane protein A (ompA) in E. coli and K. pneumoniae, underscoring its role in bacterial defense mechanisms.

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