

Native Human ELANE

Cat. No. ELANE-27537TH **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Full length native Human Neutrophil Elastase purified from Human Neutrophils; MWt 29.5kDa.
Species	Human
Description	Elastases form a subfamily of serine proteases that hydrolyze many proteins in addition to elastin. Humans have six elastase genes which encode the structurally similar proteins. The product of this gene hydrolyzes proteins within specialized neutrophil lysosomes, called azurophil granules, as well as proteins of the extracellular matrix following the proteins release from activated neutrophils. The enzyme may play a role in degenerative and inflammatory diseases by its proteolysis of collagen-IV and elastin of the extracellular matrix. This protein degrades the outer membrane protein A (OmpA) of E. coli as well as the virulence factors of such bacteria as Shigella, Salmonella and Yersinia. Mutations in this gene are associated with cyclic neutropenia and severe congenital neutropenia (SCN). This gene is clustered with other serine protease gene family members, azurocidin 1 and proteinase 3 genes, at chromosome 19pter. All 3 genes are expressed coordinately and their protein products are packaged together into azurophil granules during neutrophil differentiation.
Tissue specificity	Bone marrow cells.
Biological activity	Activity:20-22 units per mg protein. One unit is defined as the amount of enzyme that hydrolyzes one micromole of Meo-suc-ala-pro-val-pNA per minute at 25°C in 100 mM

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	Tris-HCl, pH 7.5, with 500 mM NaCl.
Form	Lyophilised
Purity	>95% by SDS-PAGE
Storage buffer	Preservative: None Constituents: ddH2O
Storage	Shipped at 4°C. Store at -20°C.
Sequence Similarities	Belongs to the peptidase S1 family. Elastase subfamily. Contains 1 peptidase S1 domain.
Full Length	Full L.

GENE INFORMATION

Gene Name	ELANE elastase, neutrophil expressed [Homo sapiens]
Official Symbol	ELANE
Synonyms	ELANE; elastase, neutrophil expressed; ELA2, elastase 2, neutrophil; neutrophil elastase; HLE; HNE; leukocyte elastase; medullasin; NE;
Gene ID	1991
mRNA Refseq	NM_001972
Protein Refseq	NP_001963
MIM	130130

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Uniprot ID	P08246
Chromosome Location	19p13.3
Pathway	C-MYB transcription factor network, organism-specific biosystem; Systemic lupus erythematosus, organism-specific biosystem; Systemic lupus erythematosus, conserved biosystem; Transcriptional misregulation in cancers, organism-specific biosystem; Transcriptional misregulation in cancers, conserved biosystem;
Function	bacterial cell surface binding; cytokine binding; endopeptidase activity; heparin binding; peptidase activity;

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