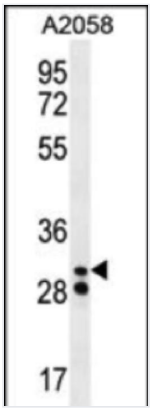
Neutrophil Elastase (ELANE) Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	Neutrophil elastase (ELANE), Polyclonal Antibody
Full Product Name	Neutrophil elastase, NT (ELANE, ELA2, Neutrophil elastase, Bone marrow serine protease, Elastase-2, Human leukocyte elastase, Medullasin, PMN elastase) (AP)
Product Gene Name	anti-ELANE antibody
Product Synonym Names	ELANE; ELA2; Neutrophil elastase; Bone marrow serine protease; Elastase-2; Human leukocyte elastase; Medullasin; PMN elastase
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human
Form/Format	Supplied as a liquid in PBS, pH 7.2. No preservative added. Labeled with Alkaline Phosphatase (AP).
Purity/Purification	Purified by Protein A and Peptide Affinity Chromatography.
Specificity	Recognizes human Neutrophil elastase.
Preparation and Storage	Store product at 4 degree C. DO NOT FREEZE! Stable at 4 degree C for 12 months after receipt as an undiluted liquid. Dilute required amount only prior to immediate use. Further dilutions can be made in assay buffer. For maximum recovery of product, centrifuge the original vial prior to removing the cap.
Molecular Weight	28,518 Da
Chromosome Location	Chromosome: 19; NC_000019.9 (852291..856246). Location: 19p13.3
OMIM	130130
3D Structure	ModBase 3D Structure for P08246
Immunogen	KLH-conjugated synthetic peptide mapping to a fragment of residues within amino acids 13-39 in the N-terminal region of human Neutrophil elastase, UniProt Accession #P08246.
Conjugate	AP
Note	Preservative Free
Product Categories/Family for anti-ELANE antibody	Antibodies; Elastase
Applications Tested/Suitable for anti-ELANE antibody	ELISA (EIA), Western Blot (WB)
Application Notes for anti-ELANE antibody	Applications are based on unconjugated antibody.

Related Product Information for anti-ELANE antibody	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 protein's 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.
Product References and Citations for anti-ELANE antibody	1. Kallquist, L., et al. Exp. Cell Res. 316(19):3182-3196(2010). 2. Rabai, G., et al. Thromb. Res. 126 (2), E94-E101 (2010). 3. Newburger, P.E., et al. Pediatr Blood Cancer 55(2):314-317(2010). 4. Hayashi, M., et al. J Nippon Med Sch 77(2):80-85(2010). 5. Hector, A., et al. Mediators Inflamm. 2010, 809591 (2010).
Other Notes	Small volumes of anti-ELANE antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for ELANE purchase	MBS6324905 is an antibody targeting ELANE. Also known as Neutrophil elastase, NT (ELANE, ELA2, Neutrophil elastase, Bone marrow serine protease, Elastase-2, Human leukocyte elastase, Medullasin, PMN elastase) (AP). Reactive in Human. Host: Rabbit.



Western Blot (WB) of anti-ELANE antibody
Western Blot analysis in A2058 cell line lysates (35ug/lane) using 038921. This demonstrates that 038921 detected the Neutrophil elastase protein (arrow).

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for ELANE. It may not necessarily be applicable to this product.

NCBI GI #	4503549
NCBI GeneID	1991
NCBI Accession #	NP_001963.1
UniProt Primary Accession #	P08246
UniProt Secondary Accession #	P09649; Q6B0D9; Q6LDP5
UniProt Related Accession #	P08246
GenBank Nucleotide #	NM_001972.2
NCBI Official Full Name	neutrophil elastase preproprotein
NCBI Official Synonym Full Names	elastase, neutrophil expressed
NCBI Official Symbol	ELANE
NCBI Official Synonym Symbols	GE; NE; HLE; HNE; ELA2; SCN1; PMN-E

UniProt Protein Name	Neutrophil elastase
UniProt Synonym Protein Names	Bone marrow serine protease; Elastase-2; Human leukocyte elastase; HLE; Medullasin; PMN elastase
Protein Family	Neutrophil elastase
UniProt Gene Name	ELANE
UniProt Synonym Gene Names	ELA2; HLE
UniProt Entry Name	ELNE_HUMAN
NCBI Protein Information	neutrophil elastase; elastase-2; medullasin; PMN elastase; leukocyte elastase; elastase 2, neutrophil; human leukocyte elastase; polymorphonuclear elastase; bone marrow serine protease; granulocyte-derived elastase
UniProt Comments for ELANE	ELANE: Modifies the functions of natural killer cells, monocytes and granulocytes. Inhibits C5a-dependent neutrophil enzyme release and chemotaxis. Defects in ELANE are a cause of cyclic haematopoiesis (CH); also known as cyclic neutropenia. CH is an autosomal dominant disease in which blood-cell production from the bone marrow oscillates with 21-day periodicity. Circulating neutrophils vary between almost normal numbers and zero. During intervals of neutropenia, affected individuals are at risk for opportunistic infection. Monocytes, platelets, lymphocytes and reticulocytes also cycle with the same frequency. Defects in ELANE are the cause of neutropenia severe congenital autosomal dominant type 1 (SCN1). SCN1 is a disorder of hematopoiesis characterized by a maturation arrest of granulopoiesis at the level of promyelocytes with peripheral blood absolute neutrophil counts below 0.5 x 10(9)/l and early onset of severe bacterial infections. Belongs to the peptidase S1 family. Elastase subfamily. Protein type: Cell surface; Motility/polarity/chemotaxis; EC 3.4.21.37; Cell cycle regulation; Protease Chromosomal Location of Human Ortholog: 19p13.3 Cellular Component: cell surface; transcriptional repressor complex; cytoplasm; extracellular region; secretory granule Molecular Function: peptidase activity; heparin binding; protein binding; protease binding; cytokine binding; serine-type endopeptidase activity; endopeptidase activity Biological Process: positive regulation of immune response; extracellular matrix organization and biogenesis; positive regulation of smooth muscle cell proliferation; negative regulation of interleukin-8 biosynthetic process; positive regulation of interleukin-8 biosynthetic process; response to lipopolysaccharide; negative regulation of transcription from RNA polymerase II promoter; negative regulation of chemotaxis; proteolysis; phagocytosis; cellular calcium ion homeostasis; positive regulation of MAP kinase activity; extracellular matrix disassembly; collagen catabolic process; negative regulation of inflammatory response; defense response to bacterium; protein catabolic process; response to yeast; leukocyte migration; response to UV; negative regulation of chemokine biosynthetic process; acute inflammatory response to antigenic stimulus Disease: Cyclic Neutropenia; Neutropenia, Severe Congenital, 1, Autosomal Dominant
Research Articles on ELANE	**1.** Neutrophil elastase activity in BAL fluid in early life was associated with early bronchiectasis in children with cystic fibrosis.
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