

Neutrophil elastase Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP12084a

Product Information

Application	WB, E
Primary Accession	P08246
Other Accession	NP_001963.1
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB18822
Calculated MW	28518
Antigen Region	28-58

Additional Information

Gene ID	1991
Other Names	Neutrophil elastase, Bone marrow serine protease, Elastase-2, Human leukocyte elastase, HLE, Medullasin, PMN elastase, ELANE, ELA2
Target/Specificity	This Neutrophil elastase antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 28-58amino acids of human Neutrophil elastase.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.05% (V/V) Proclin 300. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Neutrophil elastase Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ELANE
Synonyms	ELA2
Function	Serine protease that modifies the functions of natural killer cells, monocytes

and granulocytes. Inhibits C5a-dependent neutrophil enzyme release and chemotaxis (PubMed:[15140022](#)). Promotes cleavage of GSDMB, thereby inhibiting pyroptosis (PubMed:[36899106](#)). Promotes blood coagulation (PubMed:[20676107](#)). Through the activation of the platelet fibrinogen receptor integrin alpha-IIb/beta-3, potentiates platelet aggregation induced by a threshold concentration of cathepsin G (CTSG) (PubMed:[25211214](#), PubMed:[9111081](#)). Cleaves and thus inactivates tissue factor pathway inhibitor (TFPI) (PubMed:[20676107](#), PubMed:[25211214](#)). Capable of killing E.coli but not S.aureus in vitro; digests outer membrane protein A (ompA) in E.coli and K.pneumoniae (PubMed:[10947984](#)).

Cellular Location

Cytoplasmic vesicle, phagosome. Note=Localized in phagolysosomes following ingestion of E.coli by neutrophils

Tissue Location

Bone marrow cells. Neutrophil (PubMed:10947984).

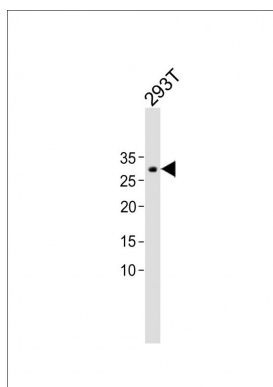
Background

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.

References

Kallquist, L., et al. Exp. Cell Res. 316(19):3182-3196(2010)
Rabai, G., et al. Thromb. Res. 126 (2), E94-E101 (2010) :
Newburger, P.E., et al. Pediatr Blood Cancer 55(2):314-317(2010)
Hayashi, M., et al. J Nippon Med Sch 77(2):80-85(2010)
Hector, A., et al. Mediators Inflamm. 2010, 809591 (2010) :

Images



All lanes: Anti-Neutrophil elastase Antibody (N-term) at 1:500 dilution + C6 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary: Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ASP1615) at 1/15000 dilution. Observed band size: 29 KDa Blocking/Dilution buffer: 5% NFDM/TBST.