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Anti-Elastase/ELANE/ELA2 Picoband Antibody

Catalog # ABO11676

Product Information

Application	WB, IHC-P
Primary Accession	Q3UP87
Host	Rabbit
Reactivity	Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Neutrophil elastase(ELANE) detection. Tested with WB, IHC-P in Mouse;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	50701
Other Names	Neutrophil elastase, 3.4.21.37, Elastase-2, Leukocyte elastase, Elane, Ela2
Calculated MW	28648
Application Details	Immunohistochemistry(Paraffin-embedded Section), 0.5-1 □g/ml, Mouse, Rat, By Heat Western blot, 0.1-0.5 □g/ml, Mouse
Source	Eukaryota
Protein Name	Neutrophil elastase
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
Immunogen	E. coli-derived mouse Elastase/ELANE/ELA2 recombinant protein (Position: S27-N265). Mouse Elastase/ELANE/ELA2 shares 92% amino acid (aa) sequence identity with rat Elastase/ELANE/ELA2.
Purification	Immunogen affinity purified.
Cross Reactivity	No cross reactivity with other proteins
Storage	At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.

Protein Information

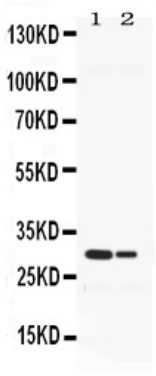
Name	Elane
Synonyms	Ela2
Function	Serine protease that modifies the functions of natural killer cells, monocytes and granulocytes (PubMed:10947984). Shows microbicidal activity in neutrophils by mediating cleavage and degradation of bacterial proteins (By similarity). Capable of killing E.coli but not S.aureus in vitro; digests outer membrane protein A (ompA) in E.coli and K.pneumoniae (PubMed:10947984). Involved for the formation of neutrophil extracellular traps (NETs): translocates into the nucleus downstream of MPO and mediates degadation of histone H4, thereby participating to chromatin decondensation (PubMed:20974816, PubMed:32045782). NETs are mainly composed of DNA fibers and are released by neutrophils to trap pathogens during inflammation (By similarity). Inhibits C5a-dependent neutrophil enzyme release and chemotaxis (By similarity). Promotes cleavage of GSDMB, thereby inhibiting pyroptosis (By similarity). 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) (By similarity). Cleaves and thus inactivates tissue factor pathway inhibitor (TFPI) (By similarity).
Cellular Location	Cytoplasmic vesicle, phagosome {ECO:0000250|UniProtKB:P08246}. Lysosome {ECO:0000250|UniProtKB:P08246}. Cytolytic granule {ECO:0000250|UniProtKB:P08246}. Nucleus {ECO:0000250|UniProtKB:P08246} Note=Localizes to azurophil granules, a type of primary lysosome found in neutrophils and monocytes that contains antimicrobial proteins (By similarity). Translocates from azurophil granules to the nucleus downstream of MPO during formation of neutrophil extracellular traps (NETs), and is present in released NETs (PubMed:32045782). Localized in phagolysosomes following ingestion of E.coli by neutrophils (By similarity). {ECO:0000250|UniProtKB:P08246, ECO:0000269|PubMed:32045782}

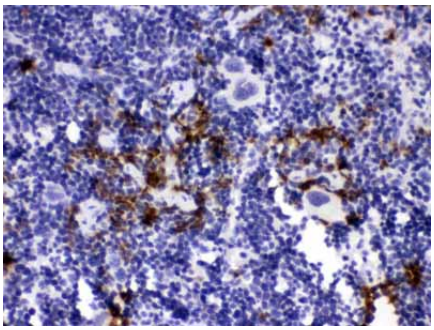
Background

Neutrophil elastase is a serine protease of neutrophil and monocyte granules. Its key physiologic role is in innate host defense, but it can also participate in tissue remodeling and possesses secretagogue actions important to local inflammatory responses. Elastases form a subfamily of serine proteases that hydrolyze many proteins in addition to elastin. Humans have six elastase genes which encode structurally similar proteins. The encoded preproprotein is proteolytically processed to generate the active protease. Following activation, this protease hydrolyzes proteins within specialized neutrophil lysosomes, called azurophil granules, as well as proteins of the extracellular matrix. This protein also 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 present in a gene cluster on chromosome 19.

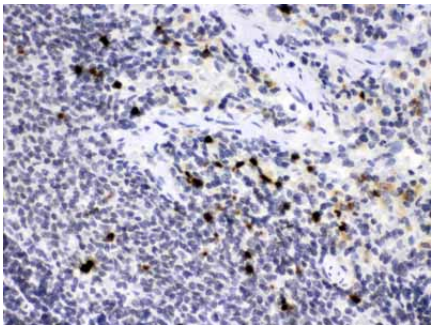
Images

Western blot analysis of Elastase/ELANE/ELA2 expression in mouse bone extract (lane 1) and mouse spleen extract (lane 2). Elastase/ELANE/ELA2 at 29KD was detected using rabbit anti- Elastase/ELANE/ELA2 Antigen Affinity purified polyclonal antibody (Catalog # ABO11676) at 0.5 □¼g/mL. The blot was developed using chemiluminescence (ECL) method .





Elastase/ELANE/ELA2 was detected in paraffin-embedded sections of mouse spleen tissues using rabbit anti-Elastase/ELANE/ELA2 Antigen Affinity purified polyclonal antibody (Catalog # ABO11676) at 1 □¼g/mL. The immunohistochemical section was developed using SABC method .



Elastase/ELANE/ELA2 was detected in paraffin-embedded sections of rat spleen tissues using rabbit anti-Elastase/ELANE/ELA2 Antigen Affinity purified polyclonal antibody (Catalog # ABO11676) at 1 ??g/mL. The immunohistochemical section was developed using SABC method .

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