BOSTER BIOLOGICAL TECHNOLOGY
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Anti-Neutrophil Elastase/ELANE Antibody Picoband®

Catalog Number: PB10058

About Elane

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.

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Overview

Product Name	Anti-Neutrophil Elastase/ELANE Antibody Picoband®
Reactive Species	Mouse, Rat
Description	Boster Bio Anti-Neutrophil Elastase/ELANE Antibody Picoband® catalog # PB10058. Tested in IHC, WB applications. This antibody reacts with Mouse, Rat. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Application	IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4 mg Trehalose, 0.9 mg NaCl and 0.2 mg Na2HPO4.
Storage Instructions	Store at -20˚C for one year from date of receipt. After reconstitution, at 4˚C for one month. It can also be aliquotted and stored frozen at -20˚C for six months. Avoid repeated freeze-thaw cycles.
Host	Rabbit
Uniprot ID	Q3UP87

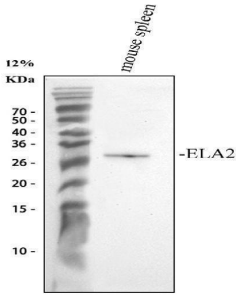
Technical Details

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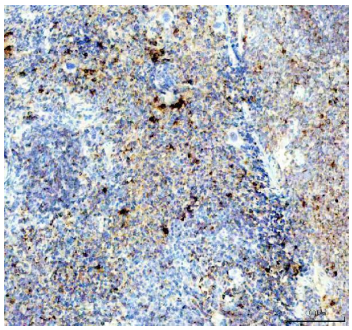
Immunogen	E. coli-derived mouse Elastase/ELANE/ELA2 recombinant protein (Position: S27-N265). Mouse Elastase/ELANE/ELA2 shares 92% amino acid (aa) sequence identity with rat Elastase/ELANE/ELA2.
Cross Reactivity	No cross-reactivity with other proteins
Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.1-0.5ug/ml, Mouse Immunohistochemistry (Paraffin-embedded Section), 2-5ug/ml, Mouse, Rat ELISA, 0.1-0.5ug/ml,-

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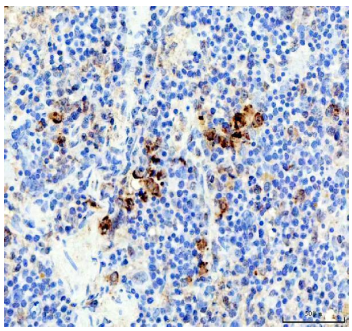
Anti-Neutrophil Elastase/ELANE Antibody Picoband® (PB10058) Images



Western blot analysis of Elastase/ELANE/ELA2 using anti-Elastase/ELANE/ELA2 antibody (PB10058). Electrophoresis was performed on a 13% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: mouse spleen tissue lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-Elastase/ELANE/ELA2 antigen affinity purified polyclonal antibody (PB10058) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody (Catalog # BA1054) at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an ECL Plus Western Blotting Substrate (Catalog # AR1196-200) with Tanon 5200 system. A specific band was detected for Elastase/ELANE/ELA2 at approximately 29 kDa. The expected band size for Elastase/ELANE/ELA2 is at 29 kDa.



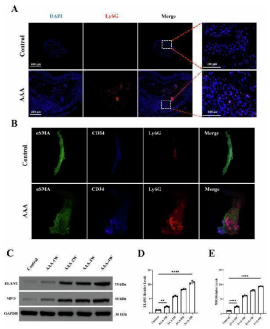
IHC analysis of Elastase/ELANE/ELA2 using anti-Elastase/ELANE/ELA2 antibody (PB10058). Elastase/ELANE/ELA2 was detected in a paraffin-embedded section of mouse spleen tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-Elastase/ELANE/ELA2 Antibody (PB10058) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.



IHC analysis of Elastase/ELANE/ELA2 using anti-Elastase/ELANE/ELA2 antibody (PB10058). Elastase/ELANE/ELA2 was detected in a paraffin-embedded section of rat spleen tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-Elastase/ELANE/ELA2 Antibody (PB10058) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

Neutrophil infiltration and NETs release within AAA lesions. A IF staining for neutrophil marker (Ly6G) was performed on

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tissue sections of the mouse abdominal aorta. B Hyalinization and IF labeling of the whole abdominal aorta and 3D tissue imaging were acquired with light-sheet microscopy. C – E Quantification of NETs markers (ELANE and MPO) in mouse abdominal aorta by western blotting (n = 3). ** P < 0.01, **** P < 0.0001, indicating statistical significance between the two groups. Index in PubMed under a CC BY license. PMID: 39237520

Anti-Neutrophil Elastase/ELANE Antibody

For Research Use Only. Not for use in diagnostic procedures.