abcam

ab243923

Anti-Neutrophil Elastase antibody [SP203] - BSA and Azide free

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	SP203
Purification technique	Affinity purification Protein A/G
Concentration	1.003 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	Purified from TCS by protein A/G.

Reactivity data

IHC-P

Tested

Species	Human

Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Target data

See full target information ELANE

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).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab243923 is the carrier-free version of ab183342.

What are the advantages of a recombinant monoclonal antibody?

This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Conjugation ready
Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility
This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Neutrophil Elastase also known as neutrophil proteinase 3 has a molecular mass of approximately 30 kDa. It is a serine protease expressed mainly in azurophilic granules of neutrophils. This enzyme breaks down various proteins including elastin at sites of inflammation. Neutrophil Elastase releases during degranulation or through neutrophil extracellular traps (NETs) to combat pathogens.
Biological function summary	The target plays a significant role in neutrophil-mediated tissue remodeling and host defense. It leads to the breaking down of extracellular matrix components contributing to tissue remodeling and repair. Neutrophil Elastase is part of a complex interplay with other proteases like matrix metalloproteinases (MMPs). Its activity is regulated by endogenous inhibitors such as alpha-1 antitrypsin to prevent excessive tissue damage.
Pathways	This protease is important in inflammation and immune response pathways. It plays a role in the complement system by activating C5 a component of the complement cascade. It also acts in conjunction with other proteases such as cathepsin G to modulate immune and inflammatory responses. Neutrophil Elastase's role within these pathways is pivotal for the regulation of inflammation and destruction of pathogens.
Associated diseases and disorders	Individuals with conditions such as chronic obstructive pulmonary disease (COPD) and cystic fibrosis often exhibit dysregulation or excessive activity of Neutrophil Elastase. This excessive activity leads to tissue damage and exacerbates disease progression. The enzyme also interacts with proteins like elastin and collagen in these diseases further contributing to pathological tissue remodeling and damage.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

We do not recommend this combination. It is not covered by our product promise.

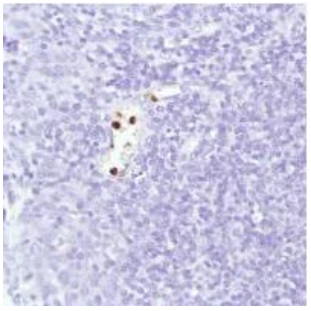
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

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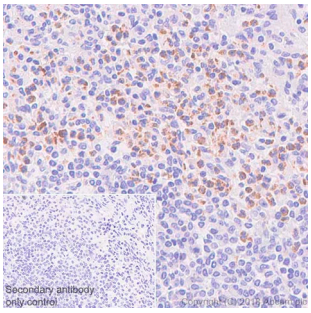
5 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Neutrophil Elastase antibody [SP203] - BSA and Azide free (ab243923)

Neutrophil Elastase Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Neutrophil Elastase antibody

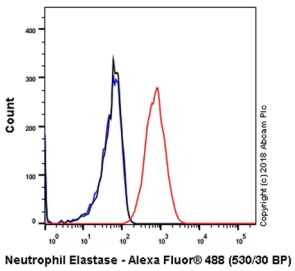
Immunohistochemical analysis of paraffin-embedded Human tonsil tissue labeling Neutrophil Elastase with ab183342 at 1/100 dilution.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, and sodium azide (ab183342).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Neutrophil Elastase antibody [SP203] - BSA and Azide free (ab243923)

Neutrophil Elastase Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Neutrophil Elastase antibody

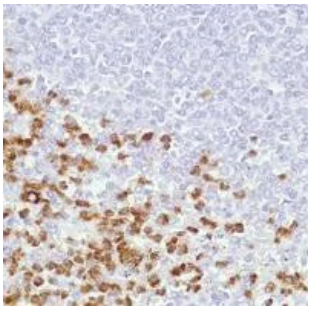
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Human spleen tissue sections labeling Neutrophil Elastase with ab183342 at 1/100 dilution (2.46 µg/ml). Heat mediated antigen retrieval was performed Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 10 mins. Rabbit specific IHC polymer detection kit HRP/DAB (ab209101) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab183342)



Flow Cytometry (Intracellular) - Anti-Neutrophil Elastase antibody [SP203] - BSA and Azide free (ab243923)

Neutrophil Elastase Flow Cytometry (Intracellular) staining using rabbit Anti-Neutrophil Elastase antibody

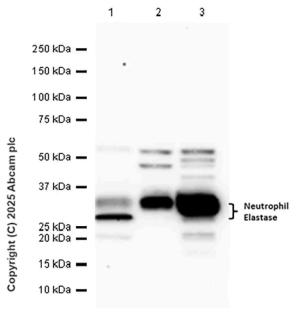
Intracellular Flow Cytometry analysis of THP-1 (human monocytic leukemia monocyte) labeling Neutrophil Elastase with purified ab183342 at 1/20 dilution (12.3µg/ml) (red). Cells were fixed with 4% paraformaldehyde and permeabilised with 90% methanol. Goat anti rabbit IgG (Alexa Fluor® 488, ab150081) at 1/2000 dilution was used as a secondary antibody. Isotype control -Rabbit monoclonal IgG (ab172730) / Black. Unlableled control -Unlabelled cells / blue. This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab183342).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Neutrophil Elastase antibody [SP203] - BSA and Azide free (ab243923)

Neutrophil Elastase Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Neutrophil Elastase antibody

Immunohistochemical analysis of paraffin-embedded Human spleen tissue labeling Neutrophil Elastase with ab183342 at 1/100 dilution.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, and sodium azide (ab183342).



Western blot - Anti-Neutrophil Elastase antibody [SP203] - BSA and Azide free (ab243923)

Neutrophil Elastase Western blot staining using rabbit Anti-Neutrophil Elastase antibody

This data was developed using ab183342, the same antibody clone in a different buffer formulation.

Blocking and diluting buffer and concentration: 5% NFDM/TBST.

Neutrophil elastase undergoes proteolytic cleavage to generate fragments (PMID: 25857284).
All lanes:
Western blot - Anti-Neutrophil Elastase antibody [SP203] (ab183342) at 1/1000 dilution

Lane 1:
HL-60 (human Acute Promyelocytic Leukemia promyeloblast) whole cell lysate at 20 µg

Lane 2:
THP-1 (human monocytic leukemia monocyte) whole cell lysate at 20 µg

Lane 3:
U937 (human histiocytic lymphoma monocyte) whole cell lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Observed band size: 26 kDa, 30 kDa

Exposure time: 40s

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.