Anti-Neutrophil Elastase antibody ab21595

Overview

Product name: Anti-Neutrophil Elastase antibody
Description: Rabbit polyclonal to Neutrophil Elastase
Host species: Rabbit
Tested applications: Suitable for: IHC-Fr, ICC/IF, ICC, IHC-P, WB, IP, ELISA
Species reactivity: Reacts with: Mouse, Rat, Human
Positive control: Bone marrow.

Properties

Form: Liquid
Storage instructions: Shipped at 4°C. Store at +4°C short term (1-2 weeks). Store at -20°C or -80°C. Avoid freeze / thaw cycle.
Storage buffer: Constituent: 50% Glycerol
Purity: Whole antiserum
Clonality: Polyclonal
Isotype: IgG

Applications

Our Abpromise guarantee covers the use of ab21595 in the following tested applications.
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

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<tr>
<td>IHC-Fr</td>
<td>★★★★★</td>
<td>Use at an assay dependent concentration.</td>
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<tr>
<td>ICC/IF</td>
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<td>Use at an assay dependent concentration. PubMed: 20818377</td>
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<td>ICC</td>
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<td>1/50 - 1/100.</td>
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Function
Modifies the functions of natural killer cells, monocytes and granulocytes. Inhibits C5a-dependent neutrophil enzyme release and chemotaxis.

Tissue specificity
Bone marrow cells.

Involvement in disease
Defects in ELANE are a cause of cyclic haematopoiesis (CH) [MIM:162800]; 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) [MIM:202700]. 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.

Sequence similarities
Belongs to the peptidase S1 family. Elastase subfamily. Contains 1 peptidase S1 domain.

Target

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Images
ab21595 staining Neutrophil Elastase in rat cornea tissue by Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections).

The section was deparaffinized with ethanol and the antigen was retrieved using a steamer. ab21595 was used at a 1/200 dilution, the secondary was an anti-rabbit IgG 1/5,000 also from Abcam. The DAB staining was performed using a DAB Peroxidase Substrate kit. The slides were counterstained with hematoxylin.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Neutrophil Elastase antibody (ab21595)

Image from Oh JY et al, Proc Natl Acad Sci U S A 2010 Sep 28;107(39):16975-80. Epub 2010 Sep 13, Fig 6. DOI 10.1073/pnas.1012451107
ab21595 staining neutrophil elastase (NE, green), DNA stained with propidium iodide (PI, red) in COPD sputum by ICC/IF (Immunocytochemistry/immunofluorescence). The sputum matrix contains condensed matrix traversed by thin neutrophil extracellular traps (NETs) strands associated with bacteria (arrowheads), non-activated polymorphonuclear neutrophils (PMNs) (open arrow) and NETotic PMNs (solid arrow); asterisks indicate fully spread NETs. Cells were blocked with 10% normal goat serum in PBS containing 10 mM glycine and 0.2% Tween 20. Samples were incubated with primary antibody (1/50). ab96883 (1/100) was used as the secondary antibody.

ab21595 at 1/20 dilution staining rat liver tissue sections by Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections). The rat was challenged with LPS at 100ug/Kg i.p. The tissue sections were formaldehyde fixed and incubated with the antibody for 2 hours. A biotinylated goat anti-rabbit IgG antibody was used as the secondary antibody.

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