## Overview

<table>
<thead>
<tr>
<th><strong>Product name</strong></th>
<th>Anti-Neutrophil Elastase antibody [EPR7479]</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description</strong></td>
<td>Rabbit monoclonal [EPR7479] to Neutrophil Elastase</td>
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<tr>
<td><strong>Host species</strong></td>
<td>Rabbit</td>
</tr>
<tr>
<td><strong>Tested applications</strong></td>
<td>Suitable for: WB, IHC-P, Flow Cyt, ICC/IF</td>
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<tr>
<td><strong>Species reactivity</strong></td>
<td>Reacts with: Human</td>
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<tr>
<td><strong>Immunogen</strong></td>
<td>Synthetic peptide within Human Neutrophil Elastase aa 250-350 (C terminal). The exact sequence is proprietary.</td>
</tr>
<tr>
<td><strong>Positive control</strong></td>
<td>HL60 cell lysate; Human bone marrow tissue</td>
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<tr>
<td><strong>General notes</strong></td>
<td>Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information. 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 production For more information see here. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents. We are constantly working hard to ensure we provide our customers with best in class antibodies. As a result of this work we are pleased to now offer this antibody in purified format. We are in the process of updating our datasheets. The purified format is designated 'PUR' on our product labels. If you have any questions regarding this update, please contact our Scientific Support team.</td>
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## Properties

<table>
<thead>
<tr>
<th><strong>Form</strong></th>
<th>Liquid</th>
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<tbody>
<tr>
<td><strong>Storage instructions</strong></td>
<td>Shipped at 4°C. Store at -20°C. Stable for 12 months at -20°C.</td>
</tr>
<tr>
<td><strong>Dissociation constant (K_D)</strong></td>
<td>$K_D = 6.00 \times 10^{-12} \text{ M}$</td>
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</table>
Learn more about $K_D$

Storage buffer
- pH: 7.20
- Preservative: 0.01% Sodium azide
- Constituents: 49% PBS, 50% Glycerol, 0.05% BSA

Purity
- Protein A purified

Clonality
- Monoclonal

Clone number
- EPR7479

Isotype
- IgG

Applications

Our Abpromise guarantee covers the use of ab131260 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

<table>
<thead>
<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
</tr>
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<tbody>
<tr>
<td>IHC-P</td>
<td>⭐⭐⭐⭐⭐</td>
<td>1/5000. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol. For unpurified use at 1/250 - 1/500. See protocols IHC antigen retrieval protocols.</td>
</tr>
<tr>
<td>Flow Cyt</td>
<td>1/20.</td>
<td>For unpurified use at 1/10 - 1/100. ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.</td>
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<tr>
<td>ICC/IF</td>
<td>⭐⭐⭐⭐⭐</td>
<td>1/70. For unpurified use at 1/250 - 1/500</td>
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Target

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 10⁹/l and early onset of severe bacterial infections.

**Sequence similarities**

Belongs to the peptidase S1 family. Elastase subfamily.

Contains 1 peptidase S1 domain.

**Images**

ab131260 staining Neutrophil Elastase in Human bone marrow tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed and paraffin-embedded, antigen retrieval was by heat mediation in Tris/EDTA buffer pH9. Samples were incubated with primary antibody (1/5000). An undiluted HRP-conjugated mouse anti-rabbit IgG was used as the secondary antibody. Tissue counterstained with Hematoxylin. PBS was used in the negative control rather than the Primary antibody.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Neutrophil Elastase antibody [EPR7479] (ab131260)

ab131260 staining Neutrophil Elastase in the HL-60 cell line by ICC/IF (Immunocytochemistry/immunofluorescence). Cells were fixed with 4% Paraformaldehyde permeabilized with 0.1% Triton X-100. Samples were incubated with primary antibody (1/70). ab150120(1/500) an Alexa Fluor®594-conjugated Goat anti-rabbit IgG was used as the secondary antibody. Nuclei were counterstained with DAPI.

Immunocytochemistry/ Immunofluorescence - Anti-Neutrophil Elastase antibody [EPR7479] (ab131260)
Overlay histogram showing HL-60 cells stained with ab131260 (red line) at 1/20 dilution. The cells were fixed with 80% methanol. The secondary antibody used was a FITC conjugated goat anti-rabbit IgG at 1/150 dilution. Isotype control antibody (black line) was rabbit monoclonal IgG used under the same conditions. Cells also incubated without primary antibody and secondary antibody (blue line).

ab131260 staining Neutrophil Elastase in Human spleen tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed and paraffin-embedded, antigen retrieval was by heat mediation in Tris/EDTA buffer pH9. Samples were incubated with primary antibody (1/5000). An undiluted HRP-conjugated mouse anti-rabbit IgG was used as the secondary antibody. Tissue counterstained with Hematoxylin. PBS was used in the negative control rather than the Primary antibody.
Immunohistochemical analysis of paraffin-embedded Human bone marrow tissue labelling Neutrophil Elastase with unpurified ab131260 at 1/250 dilution.

Anti-Neutrophil Elastase antibody [EPR7479] (ab131260) at 1/1000 dilution + HL-60 Cell Lysate at 10 µg

**Secondary**
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

**Predicted band size:** 29 kDa
**Observed band size:** 29 kDa

Overlay histogram showing HL60 cells stained with unpurified ab131260 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab131260, 1/100 dilution) for 30 min at 22°C. The secondary antibody used was goat anti-rabbit Alexa Fluor® 488 (IgG H+L) (ab150077) at 1/2000 dilution for 30 min at 22°C. Isotype control antibody (black line) was rabbit IgG (monoclonal) (1µg/1x10⁶ cells) used under the same conditions. Unlabelled sample (blue line) was also used as a control. Acquisition of >5,000 events were collected using a 20mW Argon ion laser (488nm) and 525/30 bandpass filter.
Western blot - Anti-Neutrophil Elastase antibody [EPR7479] (ab131260)

Anti-Neutrophil Elastase antibody [EPR7479] (ab131260) at 1/1000 dilution (Unpurified) + HL60 cell lysate at 10 µg

Secondary

HRP labelled goat anti-rabbit at 1/2000 dilution

**Predicted band size:** 29 kDa

Secondary antibody - goat anti-rabbit HRP (ab6721)

Equilibrium disassociation constant (K_D)

Learn more about K_D

Click here to learn more about K_D

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