Anti-Neutrophil antibody [NIMP-R14] ab2557

Overview

**Product name** Anti-Neutrophil antibody [NIMP-R14]

**Description** Rat monoclonal [NIMP-R14] to Neutrophil

**Host species** Rat

**Tested applications** Suitable for: ICC, Functional Studies, IHC-P, Flow Cyt, IHC-Fr

**Species reactivity** Reacts with: Mouse

**Immunogen** Tissue, cells or virus corresponding to Mouse Neutrophil. Purified BALB/c mouse neutrophils

**Epitope** The monoclonal antibody NIMP-R14 is highly specific for murine Ly-6G and Ly-6C.

**General notes**

The Ly-6G/-6C locus encodes a family of Ly-6 proteins including Ly-6G and Ly-6C. Ly-6 antigens have a molecular weight between 15,000 and 18,000. Ly-6G is together with Ly-6C a component of the myeloid differentiation antigen Gr-1. Ly-6G is a GPI-anchored protein and is a good marker of peripheral neutrophils. Although predominantly presents on neutrophils, it is also expressed on a subset of eosinophils, differentiating premonocytes and plasmacytoid dendritic cells. Ly-6C is a monocyte/macrophage and endothelial cell differentiation antigen regulated by interferon gamma, and may play a role in the development and maturation of lymphocytes. It is expressed on bone marrow cells, monocytes/macrophages, neutrophils, endothelial cells, and T cell subsets. Expression of Gr-1 in bone marrow correlates with granulocyte differentiation and maturation. However, the physiological role of Ly-6G alone remains still unclear. The monoclonal antibody NIMP-R14 has been successfully used to stain polymorphonuclear (PMN) cells and monocytes for fluorescent activated cell sorting and in frozen and paraffin sections. Treatment with antibodies in vivo leads to neutropenia and has inhibitory effect on local immune responses. Furthermore, it has been shown to be useful for depletion of neutrophils in mice. It depletes neutrophils as soon as 6 hours after injection and up to 6 days.

Properties

**Form** Liquid

**Storage instructions** Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.

**Storage buffer** Preservative: 0.02% Sodium azide
Constituent: 0.1% BSA

**Purity** Protein G purified

**Primary antibody notes** The Ly-6G/-6C locus encodes a family of Ly-6 proteins including Ly-6G and Ly-6C. Ly-6 antigens have a molecular weight between 15,000 and 18,000. Ly6G is together with Ly6c a component of
the myeloid differentiation antigen Gr-1. Ly6G a GPI-anchored protein and is a good marker of peripheral neutrophils. Although predominantly presents on neutrophils, it is also expressed on a subset of eosinophils, differentiating premonocytes and plasmacytoid dendritic cells. Ly6C is a monocyte/macrophage and endothelial cell differentiation antigen regulated by interferon gamma, and may play a role in the development and maturation of lymphocytes. It is expressed on bone marrow cells, monocytes/macrophages, neutrophils, endothelial cells, and T cell subsets. Expression of Gr-1 in bone marrow correlates with granulocyte differentiation and maturation. However, the physiological role of Ly6G alone remains still unclear. The monoclonal antibody NIMP-R14 has been successfully used to stain polymorphonuclear (PMN) cells and monocytes for fluorescent activated cell sorting and in frozen and paraffin sections. Treatment with antibodies in vivo leads to neutropenia and has inhibitory effect on local immune responses. Furthermore, it has been shown to be useful for depletion of neutrophils in mice. It depletes neutrophils as soon as 6 hours after injection and up to 6 days.

**Clonality**
Monoclonal

**Clone number**
NIMP-R14

**Myeloma**
210RCY3-Ag123

**Isotype**
IgG2b

**Light chain type**
unknown

### Applications

Our Abpromise guarantee covers the use of ab2557 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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<th>Application</th>
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<th>Notes</th>
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<td>ICC</td>
<td>⭐⭐⭐⭐⭐</td>
<td>Use at an assay dependent concentration.</td>
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<tr>
<td>Functional Studies</td>
<td>⭐⭐⭐⭐⭐</td>
<td>Use at an assay dependent concentration. Neutrophil depletion. Mice were treated with NIMP-R14 given intraperitoneally at a dose of 1 mg, 6 hours before infection.</td>
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<tr>
<td>IHC-P</td>
<td>⭐⭐⭐⭐☆</td>
<td>Use at an assay dependent concentration. This antibody has been reported to work well without antigen retrieval, or with retrieval in a 125 degree C decloaking chamber for 3 minutes with pH 6.5 buffer. HIER optimization may be required.</td>
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<tr>
<td>Flow Cyt</td>
<td>⭐⭐⭐⭐⭐</td>
<td>Use at an assay dependent concentration. 5 x 10^5 cells were incubated with 10 µg/ml antibody. ab18536 - Rat monoclonal IgG2b, is suitable for use as an isotype control with this antibody.</td>
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<tr>
<td>IHC-Fr</td>
<td>⭐⭐⭐⭐⭐</td>
<td>Use at an assay dependent concentration. Tested with acetone-fixed tissue.</td>
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### Target

**Cellular localization**
Cell membrane; Lipid-anchor, GPI-anchor

### Images
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Neutrophil antibody [NIMP-R14] (ab2557)


Slides from left to right include: Control SHAM, Protein-malnourished SHAM, protein-malnourished ovariectomized (OVX) female mice, and PM OVX mice treated with 17ß-estradiol.

4% paraformaldehyde-fixed mouse uterus tissue 3 or 7 days after wounding, stained for Neutrophil using ab2557 at 1/100 dilution in immunohistochemical analysis.

Frozen sections of mouse spleen. ab2557 was used in a concentration of 5 μg/ml.

Immunohistochemistry (Frozen sections) - Anti-Neutrophil antibody [NIMP-R14] (ab2557)

ab2557 at 1/80 staining mouse blood cells (ip wash cells) by Immunocytochemistry. The antibody was incubated with the cells for 1 hour and then detected using a biotinylated rabbit anti-rat (mouse adsorbed) antibody.

This image is courtesy of an Abreview submitted on 16 March 2006.
ab2557 staining Neutrophil in Mouse lung tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formalin and blocked with 2.5% serum for 30 minutes at 25°C; antigen retrieval was by heat mediation in 10mM sodium citrate. Samples were incubated with primary antibody (1/200 in 1x PBS/1% BSA/0.3% Triton X-100 buffer) for 1 hour at 25°C. A HRP-conjugated Goat anti-rat Ig polyclonal (1/200) was used as the secondary antibody.

ab2557 staining Neutrophil in mouse tumor tissue by Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections). Tissue was fixed with formaldehyde and a heat mediated antigen retrieval step was performed. Samples were then blocked, followed by incubation with the primary antibody at a 1/50 dilution for 30 minutes. A biotin-conjugated rabbit anti-rat was used as secondary antibody at a 1/400 dilution.

**Please note:** All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE"

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