abcam

ab53457

Anti-Neutrophil antibody [7/4]

Anti-Neutrophil antibody [7/4] (ab53457) is a rat monoclonal antibody detecting Neutrophil in **Western Blot, Flow Cytometry, IHC-P, IHC-Fr, ICC/IF**. Suitable for **Mouse**.

- Over 30 publications
- Trusted since 2007

Key facts

Isotype	IgG2a
Host species	Rat
Storage buffer	Preservative: 0.09% Sodium azide Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Cell preparation containing Neutrophil protein. The exact immunogen used to generate this antibody is proprietary information.
Clone number	7/4
Purification technique	Affinity purification Protein G
Specificity	Rat anti mouse Ly-6B.2, clone 7/4 recognizes the Ly-6B.2 antigen in 129J; AKR; C57BL/6; C57BL/10; C58; DBA/2; NZB; NZW; SJL; MFI; Swiss (PO) strains.A2G; A/Sn; ASW; BALB/c; C3H/HEH: CBA.T6T6 are negative or demonstrate very weak reactivity.
Epitope	Recognizes the Ly-6B.2 antigen.
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	Purified IgG prepared by affinity chromatography on Protein G from tissue culture supernatant.

Reactivity data

Flow Cyt

Tested

Species	Mouse
Dilution info	1/50 - 1/100
Notes	Use 10µl of the suggested working dilution to label 10^6 cells in 100µl. ab18450 - Rat monoclonal IgG2a, is suitable for use as an isotype control with this antibody.

WB

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

IHC-P

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

ICC/IF

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

IHC-Fr

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information Neutrophil

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Storage information	Avoid freeze / thaw cycle

Notes

What is this antibody validated in?
Anti-Neutrophil antibody [7/4] (ab53457) is a rat monoclonal antibody and is validated for use in Western Blot (WB), Flow Cytometry (Flow Cyt), Immunohistochemistry (IHC-P), Immunohistochemistry (IHC-Fr), Immunocytochemistry/immunofluorescence (ICC/IF) in Mouse samples.

Trusted by the scientific community
Anti-Neutrophil [7/4] (ab53457) was first used in a scientific publication in 2007 and has been cited over 30 times in peer-reviewed journals.

Other related products
We have a range of other formats of antibody clone [7/4] also available for your convenience: ab150437, Carrier free - ab248989, FITC - ab53453

Supplementary info

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

Activity summary	Neutrophils also known as polymorphonuclear leukocytes are a type of white blood cell essential in the immune response. These cells make up around 50-70% of the total white blood cells in human circulation. Neutrophils express various surface markers including Ly6B.2 and NIMP-R14 which are important for their identification. The typical lifespan of neutrophils is short about 6 to 24 hours and they have an approximate mass of 1.4 x 10^-12 g per cell. Neutrophils primarily reside in the bloodstream but can migrate into tissues during inflammation or infection.
Biological function summary	Neutrophils play a central role in innate immunity by engulfing and destroying pathogens through phagocytosis. They exist as part of a network with other immune cells and contribute to the release of enzymes and reactive oxygen species to combat infection. Neutrophils can also secrete granules containing antimicrobial substances. Their activity is coordinated with other components of the immune system to provide an immediate response to infections and tissue injuries.
Pathways	Neutrophils participate actively in inflammatory and immune responses. They are important in pathways like the leukocyte adhesion cascade and the oxidative burst pathway. These pathways involve interactions with proteins such as integrins and NADPH oxidase which help neutrophils adhere to endothelium and generate reactive oxygen species respectively. These interactions permit neutrophils to migrate to sites of inflammation and eliminate invading pathogens efficiently.
Associated diseases and disorders	Neutrophils relate to conditions such as chronic granulomatous disease and rheumatoid arthritis. In chronic granulomatous disease defects in components like NADPH oxidase result in an impaired ability to produce reactive oxygen species leading to recurrent infections. In rheumatoid arthritis neutrophils contribute to inflammation and joint damage through the release of enzymes and reactive oxygen intermediates. Neutrophil interactions with immune complexes in these disorders highlight the importance of their regulation in maintaining immune homeostasis.

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

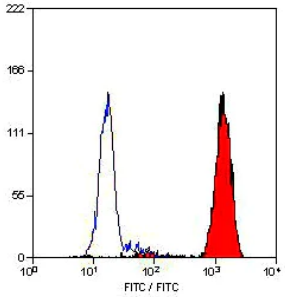
We do not recommend this combination. It is not covered by our product promise.

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.

2 product images



Flow Cytometry - Anti-Neutrophil antibody [7/4] (ab53457)

Neutrophil Flow Cytometry staining using rat Anti-Neutrophil antibody

Staining of mouse peripheral blood granulocytes with Rat anti mouse neutrophil (ab53457).

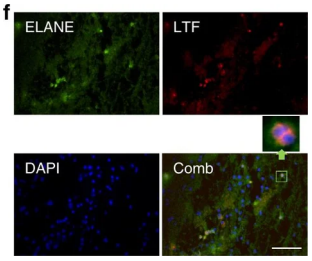


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Immunohistochemistry - Anti-Neutrophil antibody [7/4] (ab53457)

Neutrophil Immunohistochemistry staining using rat Anti-Neutrophil antibody

Immunohistochemistry-immunofluorescence using Anti-Neutrophil antibody [7/4]Anti-Neutrophil antibody [7/4], ab53457. Publication image from Zhao, X. et al., 2017, Nat Commun, 28929459. Legend direct from paper.

IL-27 induces LTF in PMNs. a Photomicrograph of representative LTF, immunostaining (green) in normal mouse BM-PMNs. The nuclei are stained with DAPI (red). b, c MFI of LTF, staining per cell was determined in BM-PMNs by flow cytometry, with T cells and monocytes serving as negative controls. Analyzed cells were from mice treated with saline or rIL-27 (50 ng/kg, i.v., at 30 min, 24 h, 42 h after ICH) and harvested at 48 h after the ICH. d Photomicrograph of representative LTF staining (green) in peripheral blood mature PMNs. The nuclei were stained with DAPI. Scale bar = 10 μM. e Bar graph of LTF, protein content (established with ELISA) in peripheral blood PMNs in naïve rats, and rats 48 h after ICH with and without treatment with rIL-27 (50 ng/kg, i.v., at 30 min, 24 h, 42 h after ICH). Data are expressed as mean ± SEM (n = 5). *p ≤ 0.05, vs. naïve rat, **p ≤ 0.05, vs. naïve rats and rats after ICH without IL-27 treatment. The p-value was established using one-way ANOVA followed by Newman–Keuls post-test. f Immunofluorescence of LTF, (red) and neutrophil elastase, ELANE (green) in a mouse brain at hematoma-affected area at 24 h after ICH. The nuclei were labeled with DAPI (blue). Scale bar = 50 μm. The insertion window highlighted the co-localization of LTF, with ELANE+ neutrophil. g LTF, protein in the ICH-affected rat brains (harvested from animals perfused with saline to flash intravascular cells), in the same animals as in e, and established using Western blot (n = 5)

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