abcam

ab280951

Anti-CD116 antibody [EPR24554-26]

Recombinant | RabMAb | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR24554-26
Purification technique	Affinity purification Protein A
Concentration	0.495 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Not recommended

Species	Mouse, Human, Rat
Dilution info	-
Notes	-

Flow Cyt

Tested

Species	Mouse
Dilution info	1/500
Notes	-

Not recommended

Species	Human, Rat
Dilution info	-
Notes	-

WB

Not recommended

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

IHC-Fr

Not recommended

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

Target data

See full target information Csf2ra

Function	Low affinity receptor for granulocyte-macrophage colony-stimulating factor (GM-CSF). Transduces a signal that results in the proliferation, differentiation, and functional activation of hematopoietic cells. Isoform 2. Contrary to isoform 1, does not trigger cell proliferation in response to GM-CSF. Isoform 3. Contrary to isoform 1, does not trigger cell proliferation in response to GM-CSF.

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

Please Note: Clone [EPR24554-26] (this product) is different to that of [EPR24554-113] (ab280357) for the same target.

Patented technology

Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

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.

Supplementary info

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

Activity summary	CD116 also known as the CSF2RA (colony-stimulating factor 2 receptor alpha subunit) is a protein that plays an important role in cytokine receptor signaling. It has a mass of approximately 43 kDa. This receptor is widely expressed on the surface of hematopoietic cells including monocytes granulocytes and some T-lymphocytes. Furthermore CD116 presents important interactions with cellular functioning by being part of a heterodimeric receptor complex. It couples with the beta subunit (CSF2RB) together mediating effects of granulocyte-macrophage colony-stimulating factor (GM-CSF).
Biological function summary	The CSF2RA is integral in facilitating cellular communication. It belongs to the cytokine receptor family specifically binding the GM-CSF. This molecule triggers signaling cascades that are essential for the proliferation differentiation and survival of various blood cells. When GM-CSF binds to the receptor complex made of CD116 and CSF2RB it activates downstream pathways influencing these critical processes thereby ensuring proper bone marrow function and immune cell activity.
Pathways	CD116 participates in significant signal transduction cascades. It is involved in the JAK-STAT pathway which plays an important role in regulating immune responses and hematopoiesis. The engagement of GM-CSF with CD116 triggers the activation of JAK kinases followed by STAT protein phosphorylation. Another pathway linked with CD116 is the MAPK pathway which further mediates downstream signals that modulate cellular growth and differentiation integrating input from various activating signals.
Associated diseases and disorders	Abnormalities in CD116 expression and function associate with several health conditions. One example is chronic myelomonocytic leukemia (CMML) where deregulated signaling through the GM-CSF receptor impacts cell proliferation and differentiation. Aberrant CD116 activity also ties into inflammation and autoimmune disorders such as rheumatoid arthritis where overactive signaling can worsen inflammatory responses. Proteins like GM-CSF and its beta receptor subunit CSF2RB accompany these disorders by contributing to the pathway dysregulation observed in these disease states.

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

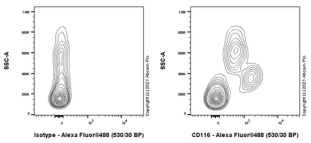
We do not recommend this combination. It is not covered by our product promise.

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.

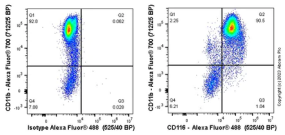
2 product images



Flow Cytometry - Anti-CD116 antibody [EPR24554-26] (ab280951)

CD116 Flow Cytometry staining using rabbit Anti-CD116 antibody

Flow cytometric analysis of Mouse blood cells cells labelling CD116 with ab280951 at 1/500 dilution (0.1ug)/ Right compared with a Rabbit monoclonal IgG (ab172730) / Left isotype control. Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) at 1/2000 dilution was used as the secondary antibody. Expression of GMRa is restrcted to cells of the myeloid, but not lymphoid (PMID 17694571).Gated on viable cells.



Flow Cytometry - Anti-CD116 antibody [EPR24554-26] (ab280951)

CD116 Flow Cytometry staining using rabbit Anti-CD116 antibody

Flow cytometry staining of C57 BL/6 mouse bone marrow cells with ab280951 (right) or Recombinant Rabbit IgG, monoclonal [EPR25A] - Isotype Control (left). Cells were incubated for 30 min on ice in 1x PBS containing 10µg/ml anti CD16/CD32 and 10% normal goat serum to block FC receptors and non-specific protein-protein interaction followed by the antibody ab280951 or Recombinant Rabbit IgG, monoclonal [EPR25A] - Isotype Control (1x 106 in 100 µl at 1.0 µg/ml (1/1990)) for 30min on ice. The cells were simultaneously stained with CD11b.

The secondary antibody Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed was incubated at 1/4000 for 30min on ice

Acquisition of >30000 events were collected using a 50 mW Blue laser (488nm) and 525/40 bandpass filter. Events were gated on viable cells.

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