abcam

ab319161

Anti-CSF-1-R antibody [EPR29702-379] - BSA and Azide free

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR29702-379
Purification technique	Affinity purification Protein A
Concentration	1.02 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Tested

Species	Mouse
Dilution info	-

Notes	-

Not recommended

Species	Recombinant fragment - Mouse, Human, Rat
Dilution info	-
Notes	-

Dot

Tested

Species	Recombinant fragment - Mouse
Dilution info	-
Notes	-

Expected

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

Not recommended

Species	Human, Rat
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Mouse
Dilution info	-
Notes	-

Not recommended

Species	Recombinant fragment - Mouse, Human, Rat
Dilution info	-
Notes	-

WB

Not recommended

Species	Human, Mouse, Rat, Recombinant fragment - Mouse
Dilution info	-
Notes	-

Target data

See full target information Csf1r

Function

Tyrosine-protein kinase that acts as a cell-surface receptor for CSF1 and IL34 and plays an essential role in the regulation of survival, proliferation and differentiation of hematopoietic precursor cells, especially mononuclear phagocytes, such as macrophages and monocytes. Promotes the release of pro-inflammatory chemokines in response to IL34 and CSF1, and thereby plays an important role in innate immunity and in inflammatory processes. Plays an important role in the regulation of osteoclast proliferation and differentiation, the regulation of bone resorption, and is required for normal bone and tooth development. Required for normal male and female fertility, and for normal development of milk ducts and acinar structures in the mammary gland during pregnancy. Promotes reorganization of the actin cytoskeleton, regulates formation of membrane ruffles, cell adhesion and cell migration, and promotes cancer cell invasion. Activates several signaling pathways in response to ligand binding, including the ERK1/2 and the JNK pathway (By similarity). Phosphorylates PIK3R1, PLCG2, GRB2, SLA2 and CBL. Activation of PLCG2 leads to the production of the cellular signaling molecules diacylglycerol and inositol 1,4,5-trisphosphate, that then lead to the activation of protein kinase C family members, especially PRKCD. Phosphorylation of PIK3R1, the regulatory subunit of phosphatidylinositol 3-kinase, leads to activation of the AKT1 signaling pathway. Activated CSF1R also mediates activation of the MAP kinases MAPK1/ERK2 and/or MAPK3/ERK1, and of the SRC family kinases SRC, FYN and YES1. Activated CSF1R transmits signals both via proteins that directly interact with phosphorylated tyrosine residues in its intracellular domain, or via adapter proteins, such as GRB2. Promotes activation of STAT family members STAT3, STAT5A and/or STAT5B. Promotes tyrosine phosphorylation of SHC1 and INPP5D/SHIP-1. Receptor signaling is down-regulated by protein phosphatases, such as INPP5D/SHIP-1, that dephosphorylate the receptor and its downstream effectors, and by rapid internalization of the activated receptor. In the central nervous system, may play a role in the development of microglia macrophages (By similarity).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C

Notes

ab319161 is the carrier-free version of ab319160.

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.

Conjugation ready
Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility
This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

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.

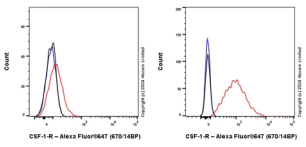
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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.

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6 product images



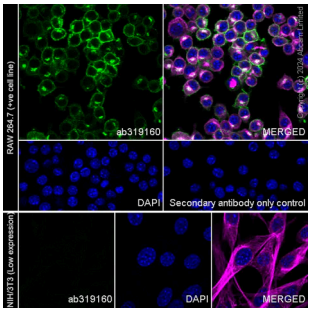
Flow Cytometry - Anti-CSF-1-R antibody [EPR29702-379] - BSA and Azide free (ab319161)

This data was developed using ab319160, the same antibody clone in a different buffer formulation.

Flow cytometric analysis of RAW 264.7 (mouse Abelson murine leukemia virus-induced tumor macrophage) (Right) / NIH/3T3 (mouse embryonic fibroblast) (Left) cells labelling CSF-1-R with ab319160 at 1/50 dilution (1ug) (Red) compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody).

Goat anti-Rabbit IgG (Alexa Fluor® 647, ab150083) at 1/5000 dilution was used as the secondary antibody.

The experiment was conducted on freshly cultured cells and cells were stained at low temperatures (2 - 8°C) on ice to preserve the surface expression of CD115, since CD115 is prone to rapid internalization under ambient room temperature conditions (PMID: 21466808).
Negative control: NIH/3T3 (PMID: 36555673).



Immunocytochemistry/ Immunofluorescence - Anti-CSF-1-R antibody [EPR29702-379] - BSA and Azide free (ab319161)

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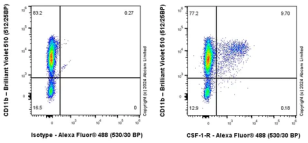
Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized RAW 264.7 (mouse Abelson murine leukemia virus-induced tumor macrophage) cells labelling CSF-1-R with ab319160 at 1/100 (5.1 ug/ml) dilution, followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/1000 dilution (Green).

Confocal image showing membranous with cytoplasmic staining in RAW 264.7 cell line (shown in green). The counterstain was observed in magenta. Nuclear DNA was labelled with DAPI (shown in

blue).
Low expression: NIH/3T3 (PMID: 36555673).
Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

ab195889 Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 dilution (Magenta). The Nuclear counterstain was DAPI (Blue).

Secondary antibody only control: Secondary antibody is ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 dilution.



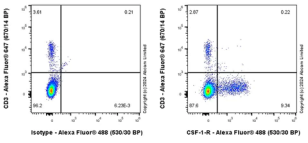
Flow Cytometry - Anti-CSF-1-R antibody [EPR29702-379] - BSA and Azide free (ab319161)

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Flow cytometric analysis of Mouse bone marrow cells labelling CSF-1-R with ab319160 at 1/50 dilution (1ug) / Right compared with a Rabbit monoclonal IgG (ab172730) / Left isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody).

Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/5000 dilution was used as the secondary antibody.

The experiment was conducted on freshly cultured cells and cells were stained at low temperatures (2 - 8°C) on ice to preserve the surface expression of CD115, since CD115 is prone to rapid internalization under ambient room temperature conditions (PMID: 21466808).
Cells were co-stained with anti mouse CD11b conjugated to Brilliant Violet 510.
Gated on viable cells.



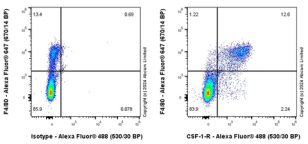
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Flow cytometric analysis of Mouse bone marrow cells labelling CSF-1-R with ab319160 at 1/50 dilution (1ug) / Right compared with a Rabbit monoclonal IgG (ab172730) / Left isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody).

Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/5000 dilution was used as the secondary antibody.

The experiment was conducted on freshly cultured cells and cells were stained at low temperatures (2 - 8°C) on ice to preserve the surface expression of CD115, since CD115 is prone to rapid internalization under ambient room temperature conditions (PMID: 21466808).
Cells were co-stained with anti mouse CD3 conjugated to Alexa Fluor®647.
Gated on viable cells.



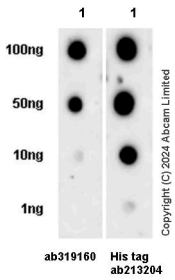
Flow Cytometry - Anti-CSF-1-R antibody [EPR29702-379] - BSA and Azide free (ab319161)

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Flow cytometric analysis of Mouse bone marrow cells labelling CSF-1-R with ab319160 at 1/50 dilution (1ug) / Right compared with a Rabbit monoclonal IgG (ab172730) / Left isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody).

Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/5000 dilution was used as the secondary antibody.

The experiment was conducted on freshly cultured cells and cells were stained at low temperatures (2 - 8°C) on ice to preserve the surface expression of CD115, since CD115 is prone to rapid internalization under ambient room temperature conditions (PMID: 21466808).
Cells were co-stained with anti mouse B220 conjugated to PE-Cy5.5 and anti mouse F4/80 conjugated to Alexa Fluor®647.
Gated on viable B220 negative cells.



Dot Blot - Anti-CSF-1-R antibody [EPR29702-379] - BSA and Azide free (ab319161)

CSF-1-R Dot Blot staining of His-tagged mouse CSF-1-R recombinant protein fragment using rabbit Anti-CSF-1-R antibody

This data was developed using ab319160, the same antibody clone in a different buffer formulation.

Dot blot analysis of CSF-1-R using ab319160 at 1:1000 (0.51 ug/ml) followed by a Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ab97051) at 1:100,000 dilution.

Lane1: His-tagged mouse CSF-1-R recombinant protein fragment

Exposure time: 180 seconds.

Blocking and diluting buffer and concentration: 5% NFDM/TBST.

All lanes:
Dot Blot - Anti-CSF-1-R antibody [EPR29702-379] (ab319160) at 1/1000 dilution

All lanes:
His-tagged mouse CSF-1-R recombinant protein fragment

Secondary

All lanes:
Dot Blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Exposure time: 180s

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