abcam

ab239943

Anti-Munc 13-4 antibody [EPR4914] - 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	EPR4914
Purification technique	Affinity purification Protein A
Concentration	1.014 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Not recommended

Species	Mouse, Human
Dilution info	-

Notes	-

IP

Not recommended

Species	Mouse, Human
Dilution info	-
Notes	-

WB

Tested

Species	Mouse, Human
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Mouse, Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	ab199376 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Expected

Species	Mouse

Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information UNC13D

Function	Plays a role in cytotoxic granule exocytosis in lymphocytes. Required for both granule maturation and granule docking and priming at the immunologic synapse. Regulates assembly of recycling and late endosomal structures, leading to the formation of an endosomal exocytic compartment that fuses with perforin-containing granules at the immunologic synapse and licences them for exocytosis. Regulates Ca(2+)-dependent secretory lysosome exocytosis in mast cells.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab239943 is the carrier-free version of ab109113.

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.

Species reactivity

Rat: We have preliminary internal testing data to indicate this antibody may not react with this species.
Please contact us for more information.

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.

Supplementary info

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

Activity summary	Munc13-4 also known as UNC13D acts as a critical mediator in the fusion of vesicles particularly in the exocytosis of cytotoxic granules in immune cells. This protein weighs approximately 120 kDa and resides in various immune cell types such as cytotoxic T lymphocytes and natural killer cells. Munc13-4 exists in the cytosol and relocates to the cell membrane upon activation supporting its role in exocytosis.
Biological function summary	Munc13-4 serves an essential function in immune response by facilitating granule-mediated cytotoxicity. This protein does not operate alone; it acts within a complex network with other members of the Unc13 protein family. The synergy between these proteins ensures the precise docking and priming of secretory vesicles aiding in effective immune responses against infected or malignant cells.
Pathways	Munc13-4 participates in the granule exocytosis pathway a central component of immune system functionality. Within this pathway Munc13-4 acts alongside proteins such as Syntaxin 11 and Rab27a influencing the regulation and release of cytolytic granules. Another vital pathway involving Munc13-4 is the calcium-dependent signaling pathway which modulates its activity and highlights its exocytotic role.
Associated diseases and disorders	Defects in Munc13-4 have a strong association with familial hemophagocytic lymphohistiocytosis type 3 (FHL3) a severe immunological disorder. The impaired function of Munc13-4 results in defective cytotoxic granule exocytosis leading to improper immune regulation. Additionally connections exist between Munc13-4 dysfunction and systemic lupus erythematosus (SLE) which implicates proteins such as Perforin and Rab27a in altered immune responses.

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.

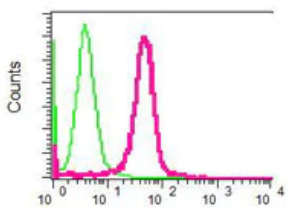
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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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1 product image



Flow Cytometry (Intracellular) - Anti-Munc 13-4 antibody [EPR4914] - BSA and Azide free (ab239943)

Munc 13-4 Flow Cytometry (Intracellular) staining using rabbit Anti-Munc 13-4 antibody

Intracellular flow cytometric analysis of permeabilized Molt-4 cells using ab109113 in red. This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab109113).

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