abcam

ab273060

Anti-CD1c antibody [EPR23189-305] - BSA and Azide free

Recombinant | RabMAb | KO Validated

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	EPR23189-305
Purification technique	Affinity purification Protein A
Concentration	1.034 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Not recommended

Species	Human, Mouse, Rat
Dilution info	-

Notes	-

Flow Cyt

Tested

Species	Human
Dilution info	1/500
Notes	We recommend to use this product for cell-surface staining only

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

WB

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

ICC/IF

Not recommended

Species	Human, Mouse, Rat
Dilution info	-

Notes	-

Target data

See full target information CD1C

Function	Antigen-presenting protein that binds self and non-self lipid and glycolipid antigens and presents them to T-cell receptors on natural killer T-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

Note: Clone EPR23189-305 (this product) is a different clone to that of ab246520.
ab273060 is the carrier-free version of ab273049.

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.

Supplementary info

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

Activity summary	CD1c also known as CD1c molecule or R7 is a transmembrane glycoprotein with a molecular weight of approximately 43 kDa. It belongs to the CD1 family of glycoproteins which share structural similarity to major histocompatibility complex (MHC) proteins. CD1c presents lipid and glycolipid antigens to T cells. It is expressed on professional antigen-presenting cells (APCs) like dendritic cells B cells and some monocytes. This expression allows CD1c to function in the immune response by presenting specialized antigens to T cells.
Biological function summary	The function of CD1c involves the presentation of lipid antigens which plays a role in immune recognition. CD1c is a part of a complex that includes β2-microglobulin which stabilizes its structure for antigen presentation. CD1c contributes to the immune surveillance by enabling the recognition of microbial lipid antigens as well as self-lipids by specific T cell subsets. This function supports the body's immune defense by identifying and reacting to potential pathogenic lipids.
Pathways	CD1c is involved in immune response pathways that center around antigen presentation. It interacts with other proteins like CD1a CD1b and CD1d expanding the range of antigens that T cells can recognize. CD1c participates in the lipid antigen presentation pathway influencing both innate and adaptive immunity. The presentation of lipid antigens by CD1c to T cells can trigger signaling pathways that affect both immune activation and resolution.
Associated diseases and disorders	CD1c is implicated in autoimmune diseases and infections. Its role in antigen presentation makes it a potential factor in autoimmune conditions where immune recognition errors might occur. Additionally CD1c may relate to infectious diseases where mycobacteria or other pathogens present unique lipid antigens. Through its interaction with T cell receptors CD1c can impact how well immune responses are mounted against these challenges making it a notable target for therapeutic development and research.

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.

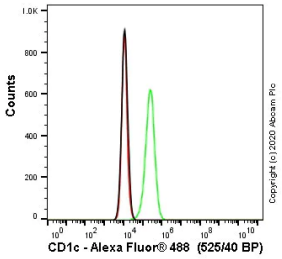
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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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3 product images



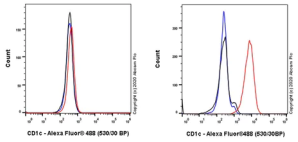
Flow Cytometry - Anti-CD1c antibody [EPR23189-305] - BSA and Azide free (ab273060)

CD1c Flow Cytometry staining using rabbit Anti-CD1c antibody

Flow cytometry overlay histogram histogram showing wild-type (green line) and CD1C knockout Jurkat cells stained with ab273049 (red line). The cells were incubated in 1x PBS containing 10 % normal goat serum to block non-specific protein-protein interaction followed by the antibody (ab273049) ($1x10^6$ in 100 µl at 0.2 µg/ml) for 30 min at 4°C.
The secondary antibody Goat anti-rabbit IgG H&L (Alexa Fluor® 488, pre-adsorbed) (ab150081) was used at 1/2000 for 30 min at 4°C.

Isotype control antibody was Rabbit IgG (monoclonal) (ab172730) used at the same concentration and conditions as the primary antibody (wild-type Jurkat - black line; CD1C knockout Jurkat - grey line). Unlabelled sample was also used as a control (this line is not shown for the purpose of simplicity).

Acquisition of >5000 events were collected using a 50 mW Blue laser (488nm) and 525/40 bandpass filter.



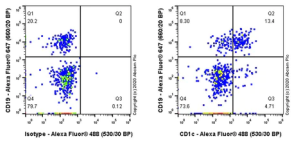
Flow Cytometry - Anti-CD1c antibody [EPR23189-305] - BSA and Azide free (ab273060)

CD1c Flow Cytometry staining using rabbit Anti-CD1c antibody

Flow cytometric analysis of THP-1 (Human monocytic leukemia monocyte)(Left) / Jurkat (Human T cell leukemia T lymphocyte)(Right) cells labelling CD1c with ab273049 at 1/500 dilution (0.1ug) (Red) compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) at 1/2000 dilution was used as the secondary antibody.
Negative control: THP-1 (PMID: 24935257).

Gated on viable cells.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab273049).



Flow Cytometry - Anti-CD1c antibody [EPR23189-305] - BSA and Azide free (ab273060)

CD1c Flow Cytometry staining using rabbit Anti-CD1c antibody

Flow cytometric analysis of Human peripheral blood mononuclear cell (PBMC) cells labelling CD1c with ab273049 at 1/500 dilution (0.1ug) (Right) compared with a Rabbit monoclonal IgG (ab172730) isotype control (Left). Cells were stained with rabbit IgG (Left) or ab273049 (Right). Then stained with anti-CD19 conjugated to Alexa Fluor® 647.
Gated on viable cells.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab273049).

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