abcam

ab256344

Anti-CD1d antibody [EPR22526-9]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 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	EPR22526-9
Purification technique	Affinity purification Protein A
Concentration	0.561 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Human
Dilution info	1/30
Notes	-

Flow Cyt

Tested

Species	Human
Dilution info	1/600
Notes	-

WB

Tested

Species	Human
Dilution info	1/1000
Notes	-

IHC-P

Not recommended

Species	Human
Dilution info	-
Notes	-

ICC/IF

Not recommended

Species	Human
Dilution info	-
Notes	-

Target data

See full target information CD1D

Function Antigen-presenting protein that binds self and non-self glycolipids and presents them to T-cell receptors on natural killer T-cells.

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

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	CD1d is a non-classical major histocompatibility complex (MHC) class I-like molecule also known as the CD1d molecule. This protein has a mass of approximately 37 kDa and plays an important role in the presentation of lipid antigens to T cells. CD1d is mainly expressed on the surface of antigen-presenting cells including dendritic cells B cells and epithelial cells in the intestine. The expression pattern highlights its relevance in immune responses at mucosal surfaces.
Biological function summary	CD1d functions by presenting lipid and glycolipid antigens to a specialized subset of T cells called invariant Natural Killer T (iNKT) cells. CD1d forms a complex with these antigens in the endosomal compartment before migrating to the cell surface. This interaction is critical for activating iNKT cells which then produce

	cytokines that influence both innate and adaptive immune responses. It is distinct in its role compared to classical MHC molecules in antigen presentation.
Pathways	CD1d's role in antigen presentation influences numerous immune signaling pathways. Its interaction with iNKT cells is part of the broader immune regulatory network impacting the Th1/Th2 cytokine balance and contributing to immune surveillance. CD1d works alongside proteins involved in these pathways such as CD1b and CD1c which also present lipids to T cells highlighting their involvement in maintaining immune system homeostasis.
Associated diseases and disorders	CD1d has been linked to autoimmune diseases and cancers. Within autoimmune disorders the interaction between CD1d and iNKT cells affects disease pathogenesis possibly through cytokine dysregulation. In some cancers CD1d expression changes can disrupt normal immune function allowing tumors to progress. Through these diseases CD1d interacts with proteins such as Nor32 and Nor3 impacting how immune cells recognize and respond to diseased or cancerous cells.

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

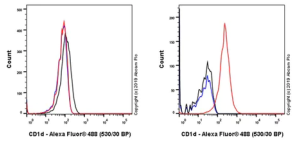
We do not recommend this combination. It is not covered by our product promise.

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.

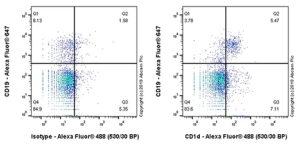
4 product images



Flow Cytometry - Anti-CD1d antibody [EPR22526-9] (ab256344)

CD1d Flow Cytometry staining using rabbit Anti-CD1d antibody

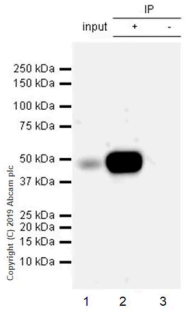
Flow cytometric analysis of K562 (human chronic myelogenous leukemia lymphoblast, Left) / Jurkat (human T cell leukemia T lymphocyte, Right) cells labeling CD1d with ab256344 at 1/600 dilution (0.1µg) (Red) compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabeled control (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. Gated on viable cells.
Negative control: K562 (PMID: 21037579).



Flow Cytometry - Anti-CD1d antibody [EPR22526-9] (ab256344)

CD1d Flow Cytometry staining using rabbit Anti-CD1d antibody

Flow cytometric analysis of human peripheral blood mononuclear cell (PBMC) cells labeling CD1d with ab256344 at 1/600 dilution (0.1µg) (Right) compared with a Rabbit monoclonal IgG (ab172730) (Left) isotype control. Goat anti rabbit IgG (Alexa Fluor® 488, ab150097) at 1/5000 dilution was used as the secondary antibody. Cells were stained with rabbit IgG (Left) or ab256344 (Right). Then stained with anti-CD19 conjugated to Alexa Fluor® 647. Gated on viable cells.



Immunoprecipitation - Anti-CD1d antibody [EPR22526-9] (ab256344)

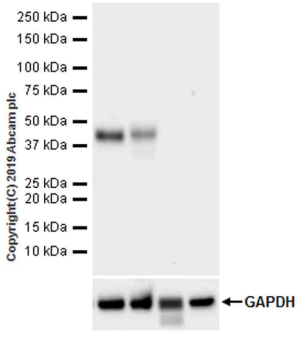
CD1d was immunoprecipitated from 0.35 mg Jurkat (human T cell leukemia T lymphocyte) whole cell lysate with ab256344 at 1/30 dilution (2µg in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab256344 at 1/1000 dilution (0.6 µg/ml). VeriBlot for IP Detection Reagent (HRP) (ab131366) was used as the secondary antibody at 1/5000 dilution.
Lane 1: Jurkat whole cell lysate (10µg)
Lane 2: ab256344 IP in Jurkat whole cell lysate
Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab256344 in Jurkat whole cell lysate.

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

Exposure time: 3 mins.

All lanes:
Immunoprecipitation - Anti-CD1d antibody [EPR22526-9] (ab256344)

Predicted band size: 38 kDa



Western blot - Anti-CD1d antibody [EPR22526-9] (ab256344)

CD1d Western blot staining using rabbit Anti-CD1d antibody

The molecular weight observed is consistent with what has been described in the literature (PMID: 10809957).
Negative control: SH-SY5Y (PMID: 26749374), K562 (PMID: 21037579).

Blocking/Dilution buffer: 5% NFDM/TBST.

All lanes:
Western blot - Anti-CD1d antibody [EPR22526-9] (ab256344) at 1/1000 dilution

Lane 1:

Jurkat (human T cell leukemia T lymphocyte), whole cell lysate at 20 µg

Lane 2:
MOLT-4 (human lymphoblastic leukemia T lymphoblast), whole cell lysate at 20 µg

Lane 3:
SH-SY5Y (human neuroblastoma epithelial cell), whole cell lysate at 20 µg

Lane 4:
K562 (human chronic myelogenous leukemia lymphoblast), whole cell lysate at 20 µg

Secondary

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

Predicted band size: 38 kDa

Observed band size: 48 kDa

Exposure time: 37s

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