abcam

ab78220

Anti-CD1b antibody [WM25]

Recombinant

Key facts

Isotype	IgG1
Host species	Mouse
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	WM25
Purification technique	Affinity purification Protein A
Concentration	1.171 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt

Tested

Species	Human
Dilution info	-
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

WB

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

IHC-Fr

Not recommended

Species	Human, Rat, Mouse
Dilution info	-
Notes	-

Target data

See full target information CD1B

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 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

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.

Want a custom formulation?
This antibody clone is manufactured by Abcam. If you require a custom buffer formulation or conjugation for your experiments, please contact orders@abcam.com

Supplementary info

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

Activity summary	CD1b also known as CD1B is a member of the CD1 family of glycoproteins with a molecular mass around 37 to 40 kilodaltons. It is expressed on the surface of antigen-presenting cells such as dendritic cells and some monocytes. CD1b plays a mechanical role in binding lipid-based antigens. This binding facilitates the presentation of these antigens to T cells. Its presence on the cell surface is essential for this antigen presentation function.
Biological function summary	CD1b functions in the immune system as part of the antigen presentation complex. It specifically presents lipid antigens derived from microbial sources to T cells helping create an immune response. The protein associates with beta-2 microglobulin which stabilizes its structure on the cell surface. CD1b can effectively capture and present mycobacterial lipid antigens which are important for the immune response against certain bacterial infections.

Pathways	CD1b actively contributes to immunity by participating in the lipid antigen presentation pathway. This pathway involves the trafficking of endogenous and exogenous lipids aided by proteins like saposins. CD1b interacts with other CD1 family proteins such as CD1a and CD1c which are involved in similar pathways for presenting different types of lipid antigens to T cells therefore diversifying the immune response.
Associated diseases and disorders	CD1b is implicated in tuberculosis as Mycobacterium tuberculosis interacts with this protein to modulate the host's immune defenses. Defective CD1b function can influence the body's response to this pathogen potentially leading to a chronic infection state. It also relates to autoimmune diseases such as multiple sclerosis where dysregulated lipid antigen presentation might influence disease progression. In these conditions interactions with proteins like HLA-DR can modify the immune landscape and disease outcomes.

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

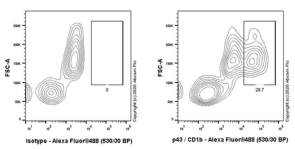
We do not recommend this combination. It is not covered by our product promise.

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.

1 product image



Flow Cytometry - Anti-CD1b antibody [WM25] (ab78220)

CD1b Flow Cytometry staining using mouse Anti-CD1b antibody

Flow cytometric analysis of human PBMC+GM-CSF (100 ng/ml 3 days) + IL-4 (50 ng/ml 3 days) then GM-CSF (100 ng/ml 3 days) + IL-4 (50 ng/ml 3 days) (+) labelling CD1b with ab78220 at 1/1000 dilution (0.1 µg)/ Right compared with a Mouse monoclonal IgG / Left isotype control.
Goat anti mouse IgG (Alexa Fluor® 488, ab150113) at 1/2000 dilution was used as the secondary antibody.

Gated on viable cells.

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