abcam

ab190305

Anti-CD1c antibody [L161]

KO Validated

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	pH: 7.4 Preservative: 0.097% Sodium azide Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Cell preparation containing CD1C protein. The exact immunogen used to generate this antibody is proprietary information. Database link P29017
Clone number	L161
Purification technique	Affinity purification Protein A
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	ab190305 was purified from cell culture supernatant. Purity >95% by SDS-PAGE.

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	1-4 µg/mL

Notes	ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

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 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

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

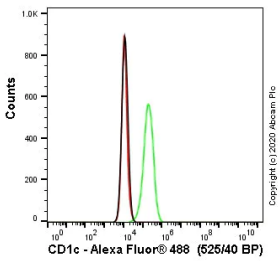
We do not recommend this combination. It is not covered by our product promise.

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.

4 product images



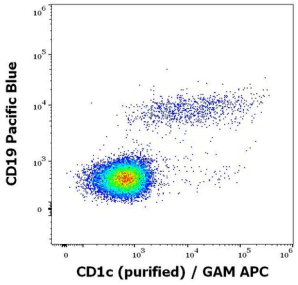
Flow Cytometry - Anti-CD1c antibody [L161] (ab190305)

CD1c Flow Cytometry staining using mouse Anti-CD1c antibody

Flow cytometry overlay histogram histogram showing wild-type (green line) and CD1C knockout (red line) Jurkat cells stained with ab190305. The cells were incubated in 1x PBS containing 10 % normal goat serum to block non-specific protein-protein interaction followed by the antibody (ab190305) (1x10^6 in 100 µl at 0.2 µg/ml) for 30 min at 4°C.
The secondary antibody Goat anti-mouse IgG H&L (Alexa Fluor ® 488, pre-adsorbed) (ab150117) was used at 1/2000 for 30 min at 4°C.

Isotype control antibody was mouse IgG1, kappa (ab170190) 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).

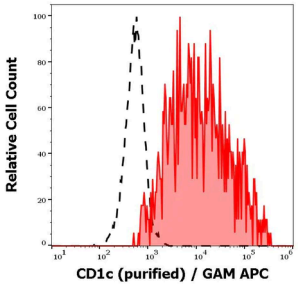
Acquisition of >5000 events were collected using a 50 mW Blue laser (488nm) and 525/40 bandpass filter.



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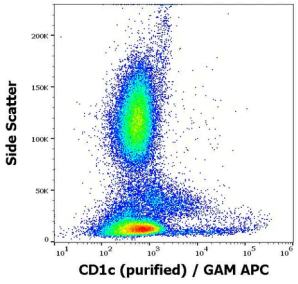
Flow cytometry analysis of human peripheral whole blood labeling CD1c with ab190305 at 0.33 µg/mL and CD19 with anti-human CD19 (LT19) APC antibody (ab18224) (20 µl reagent / 100 µl of peripheral whole blood).



Flow Cytometry - Anti-CD1c antibody [L161] (ab190305)

CD1c Flow Cytometry staining using mouse Anti-CD1c antibody

Separation of human CD1c positive CD19 positive lymphocytes (red-filled) from neutrophil granulocytes (black-dashed) in flow cytometry analysis (surface staining) of human peripheral whole blood using anti-human CD1c (L161) purified antibody (ab190305) (concentration in sample 0.33 µg/ml, GAM APC).



Flow Cytometry - Anti-CD1c antibody [L161] (ab190305)

CD1c Flow Cytometry staining using mouse Anti-CD1c antibody

Flow cytometry analysis of human peripheral whole blood labeling CD1c with ab190305 at 0.33 µg/mL.

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