abcam

ab234217

APC Anti-CD1a antibody [SK9]

Anti-CD1a antibody [SK9] conjugated to APC - suitable for flow cytometry, and reacts with human samples. Clone [SK9] is a mouse monoclonal antibody.

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Key facts

Isotype	IgG2b
Host species	Mouse
Conjugation	APC
Excitation/Emission	Ex: 650nm, Em: 660nm
Storage buffer	pH: 7.4 Preservative: 0.0975% Sodium azide Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Cell preparation containing CD1A protein. The exact immunogen used to generate this antibody is proprietary information. Database link P06126
Clone number	SK9
Purification technique	Size-exclusion chromatography
Purification notes	ab234217 is conjugated with cross-linked Allophycocyanin (APC) under optimum conditions. The conjugate is purified by size-exclusion chromatography and adjusted for direct use.

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	10 µL for 10^6 Cells
Notes	(or 100 µL whole blood)

Target data

See full target information CD1A

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	Store in the dark

Supplementary info

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

Activity summary	CD1a also known as T6 antigen or CD1 is a protein with an estimated molecular mass of 37 kDa. It is expressed mainly on the surface of Langerhans cells in the skin and dendritic cells in the thymus. CD1a belongs to the CD1 family which presents lipid antigens to T cells. The protein is an important marker in immunophenotyping of these dendritic cells making it useful in flow cytometry applications.
Biological function summary	CD1a participates in the immune system by presenting lipid and glycolipid antigens to T lymphocytes including natural killer T (NKT) cells. It forms a complex with β2-microglobulin which is essential for its proper function and antigen presentation. CD1a expression helps differentiate between types of dendritic cells with CD1a-positive cells often engaging in specific responses to microbial lipid antigens.

Pathways	CD1a plays a significant role in the antigen presentation pathway particularly in lipid antigen presentation to T cells. This is important for initiating immune responses. It interacts with related proteins such as CD1b and CD1c which also present lipid antigens. CD1a has implications in innate and adaptive immunity and can influence pathways involved in microbial recognition and elimination.
Associated diseases and disorders	CD1a is associated with certain skin conditions like Langerhans Cell Histiocytosis and psoriasis. It is involved in the pathogenesis of these diseases by affecting immune responses in the skin. In Langerhans Cell Histiocytosis CD1a-positive cells accumulate abnormally. Additionally CD1a is often studied alongside related proteins like CD207 (Langerin) to understand these conditions better.

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

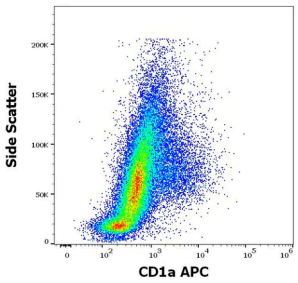
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In the unlikely event of one of our products not working as expected, you are covered by our product promise.

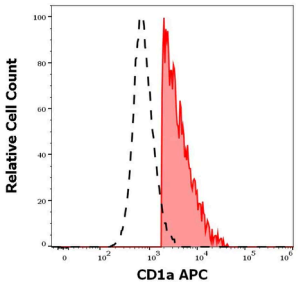
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2 product images



Flow Cytometry - APC Anti-CD1a antibody [SK9] (ab234217)

Flow cytometry surface staining pattern of human GM-CSF and IL-4 stimulated peripheral blood mononuclear cells stained using ab234217 (10 µL reagent / 100 µL of peripheral whole blood).



Flow Cytometry - APC Anti-CD1a antibody [SK9] (ab234217)

Separation of human CD1a positive cells (red-filled) from cells stained using mouse IgG1 isotype control APC antibody (concentration in sample 5 µg/ml, same as CD11a APC concentration, black-dashed) in flow cytometry analysis (surface staining) of human GM-CSF and IL-4 stimulated peripheral blood mononuclear cells stained using ab234217 (10 µL reagent / 100 µL of peripheral whole blood).

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