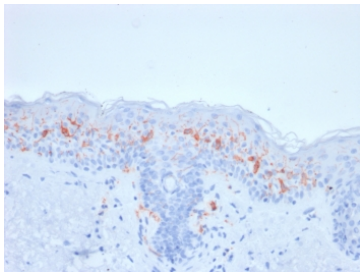
CD1A Antibody / Dendritic Cell Differentiation Marker Antibody [clone rC1A/711] (V3541)

Catalog No.	Formulation	Size
V3541-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V3541-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V3541SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug
V3541IHC-7ML	Prediluted in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide; *For IHC use only*	7 ml

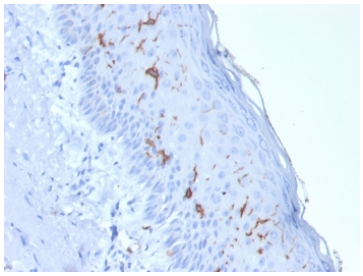
Recombinant MOUSE MONOCLONAL

Bulk quote request

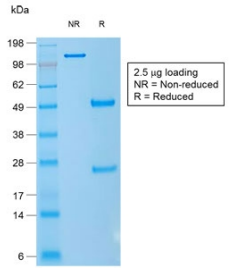
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Recombinant Mouse Monoclonal
Isotype	Mouse IgG1, kappa
Clone Name	rC1A/711
Purity	Protein G affinity chromatography
Buffer	1X PBS, pH 7.4
UniProt	P06126
Gene ID	909
Localization	Cell surface, cytoplasmic
Applications	Immunohistochemistry (FFPE) : 0.5-1ug/ml for 30 min at RT
Limitations	This recombinant CD1a antibody is available for research use only.



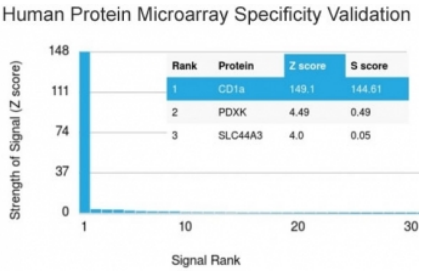
CD1A Antibody for IHC. Immunohistochemistry analysis of CD1A / CD1a expression in FFPE human skin using CD1A Antibody. Membranous and cytoplasmic staining is observed in dendritic cells within the epidermis, consistent with Langerhans cell localization, while surrounding keratinocytes remain largely negative. The distribution of CD1a-positive cells along the epithelial layer reflects dendritic cell differentiation within the epidermis and supports identification of developing antigen-presenting cells in tissue. Required HIER: boil tissue sections in 10 mM citrate buffer, pH 6, for 10-20 minutes.



CD1A Antibody for IHC. Immunohistochemistry analysis of CD1A / CD1a expression in FFPE human skin using CD1A Antibody. Membranous and cytoplasmic staining is observed in scattered dendritic cells within the epidermis, consistent with Langerhans cell localization, while surrounding keratinocytes remain largely negative. The presence of CD1a-positive cells along the epithelial layer reflects dendritic cell differentiation within the epidermis and supports identification of developing antigen-presenting cells in tissue. Required HIER: boil tissue sections in 10 mM citrate buffer, pH 6, for 10-20 minutes.



SDS-PAGE analysis of purified, BSA-free recombinant CD1a antibody (clone rC1A/711) as confirmation of integrity and purity.



CD1A Antibody. Protein microarray analysis of CD1A / CD1a specificity using a HuProt(TM) array containing more than 19,000 full-length human proteins and CD1A Antibody. CD1A produces the highest signal intensity with strong separation from the next highest-ranking proteins, supporting selective detection consistent with its expression in dendritic lineage cells. Z-score represents signal strength relative to the array mean, while S-score reflects the degree of separation between CD1A and non-target proteins, indicating highly specific recognition with clear target discrimination across the protein panel.

Description

CD1 molecule alpha 1 (CD1A) is a membrane glycoprotein encoded by the CD1A gene that is widely used as a marker of dendritic cell differentiation and immune lineage development. CD1A antibody, also referred to as CD1a antibody or T-cell surface glycoprotein CD1a antibody, enables detection of CD1A expression in studies examining the development and maturation of antigen-presenting cells. CD1A Antibody is particularly useful for identifying dendritic cell subsets and tracking their differentiation from precursor populations within the immune system.

CD1a expression is closely associated with immature and developing dendritic cells, including Langerhans cells and thymocyte-related immune populations. During hematopoietic differentiation, CD1A is upregulated as progenitor cells acquire antigen-presenting capabilities, marking a transition toward functional dendritic cell identity. This makes CD1A a valuable marker for distinguishing early-stage dendritic cells from other leukocyte populations and for studying lineage commitment within the immune system.

In tissue and cellular models, CD1a-positive cells can be used to identify developing antigen-presenting cells and to evaluate changes in differentiation status under different biological conditions. This is particularly relevant in studies of immune development, where shifts in CD1A expression reflect progression along dendritic cell maturation pathways. Detection of CD1a therefore supports analysis of how precursor cells evolve into specialized immune cells capable of

antigen presentation.

Alterations in dendritic cell differentiation are associated with immune dysregulation, inflammatory disorders, and changes in immune competence. CD1A expression can be used to monitor these alterations, providing insight into how immune cell populations respond to environmental signals, cytokine exposure, or pathological conditions. A CD1a antibody enables researchers to track these changes and to characterize the composition of developing immune cell populations.

CD1A Antibody is therefore well suited for studies focused on dendritic cell differentiation and immune lineage analysis. Its use supports identification of developing antigen-presenting cells and enables investigation of cellular pathways that regulate immune system development, maturation, and functional specialization.

A full range of CD1A antibody reagents for immunohistochemistry, western blot, and flow cytometry is available on our CD1A Antibody collection page.

Application Notes

The concentration stated for each application is a general starting point. Variations in protocols, secondaries and substrates may require the CD1A Antibody / Dendritic Cell Differentiation Marker Antibody to be titered up or down for optimal performance.

1. The prediluted format is supplied in a dropper bottle and is optimized for use in IHC. After epitope retrieval step (if required), drip mAb solution onto the tissue section and incubate at RT for 30 min.

Immunogen

Full length human CD1a protein was used as the immunogen for this CD1A Antibody / Dendritic Cell Differentiation Marker Antibody.

Storage

Store the recombinant CD1a antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

CD1a antibody, dendritic cell differentiation marker antibody, CD1A immune lineage antibody, Langerhans precursor marker antibody, T-cell surface glycoprotein CD1a antibody

References (4)