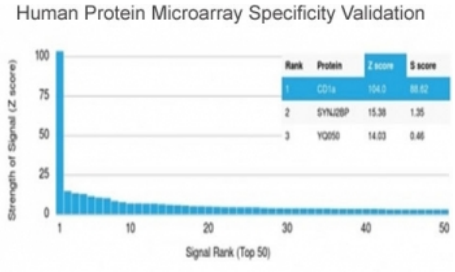
CD1A Antibody / Proteome-Wide Specificity Validated Antibody [clone C1A/2777] (V4058)

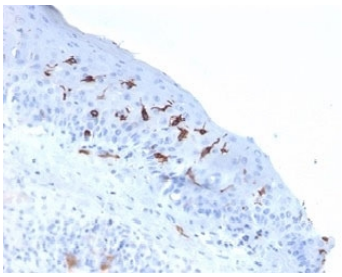
Catalog No.	Formulation	Size
V4058-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V4058-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V4058SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG, kappa
Clone Name	C1A/2777
Purity	Protein A/G affinity
UniProt	P06126
Localization	Cell surface
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml
Limitations	This CD1a antibody is available for research use only.



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 shows the highest signal intensity among all tested proteins, supporting selective recognition across a proteome-wide panel. Z-score represents signal strength relative to the array mean, while S-score reflects the separation between CD1A and the next highest-ranking proteins, indicating strong target specificity with minimal cross-reactivity.



CD1A Antibody for IHC. Immunohistochemistry analysis of CD1A / CD1a expression in FFPE human skin tissue 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 staining pattern highlights tissue-resident antigen-presenting cells within the epithelial layer and supports specific detection of CD1a in skin. HIER: boil tissue sections in pH 9 10 mM Tris with 1 mM EDTA for 20 minutes and allow to cool before testing.

Description

CD1 molecule alpha 1 (CD1A) is a transmembrane glycoprotein encoded by the CD1A gene that functions in lipid antigen presentation to T cells and is widely recognized as a marker of dendritic cells, particularly Langerhans cells within epithelial tissues. CD1A antibody, also known as CD1a antibody or T-cell surface glycoprotein CD1a antibody, enables detection of CD1A protein across a range of experimental systems, supporting analysis of antigen-presenting cell populations and immune-related processes in both normal and disease contexts.

CD1a expression is largely restricted to dendritic lineage cells, including Langerhans cells in the epidermis and mucosal epithelia, as well as cortical thymocytes, while most other cell types show minimal or absent expression. This selective distribution makes CD1A a valuable marker for identifying antigen-presenting cells within complex tissues and cellular mixtures. Detection of CD1a can therefore provide insight into immune surveillance, epithelial immune interactions, and the spatial organization of dendritic cells within tissue compartments.

Microarray-based specificity testing further supports selective recognition of CD1A by evaluating antibody binding across a large panel of full-length human proteins. In this format, the antibody is exposed to thousands of individual protein targets simultaneously, enabling assessment of potential cross-reactivity under controlled conditions. The observed binding signal is restricted to CD1A, with minimal interaction detected among unrelated proteins. This proteome-wide screening approach provides strong evidence of target selectivity and supports reliable detection of CD1a in samples containing diverse protein populations.

Proteome-scale specificity assessment is particularly important when analyzing heterogeneous biological samples such as tissue lysates, dissociated cells, or complex culture systems. In these contexts, non-specific binding can lead to misleading results if not properly controlled. Demonstration of selective interaction with CD1A across a broad protein panel supports confidence that observed signal reflects true target recognition rather than off-target binding, contributing to more accurate interpretation of experimental data.

CD1A Antibody is therefore well suited for applications requiring high specificity in the detection of CD1a, including studies of dendritic cell biology, immune cell distribution, and antigen presentation pathways. Its performance in proteome-wide microarray specificity testing supports reliable identification of CD1A across diverse experimental conditions, enabling consistent and biologically meaningful detection of this antigen-presenting cell marker.

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

Application Notes

Optimal dilution of the CD1A Antibody / Proteome-Wide Specificity Validated Antibody should be determined by the researcher.

Immunogen

A portion of amino acids 1-200 from the human protein was used as the immunogen for the CD1A Antibody / Proteome-Wide Specificity Validated Antibody.

Storage

Aliquot the CD1a antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

CD1a antibody, CD1A specificity antibody, CD1a protein detection antibody, T-cell surface glycoprotein CD1a antibody, proteome-wide validated CD1A antibody