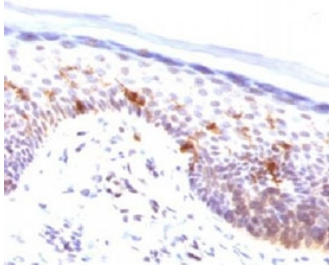
CD1A Antibody / Mucosal Immunity Marker Antibody [clone CLDA1a] (V7012)

Catalog No.	Formulation	Size
V7012-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V7012-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V7012SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	CLDA1a
Purity	Protein G affinity chromatography
Buffer	1X PBS, pH 7.4
Gene ID	909 (Human)
Localization	Cell surface, cytoplasmic
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml for 30 min at RT
Limitations	This CD1a antibody is available for research use only.



CD1A Antibody for IHC. Immunohistochemistry analysis of CD1A / CD1a expression in FFPE human skin tissue using CD1A Antibody (clone CLDA1a). Membranous and cytoplasmic staining is observed in 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 immune surveillance at barrier surfaces and supports evaluation of dendritic cells involved in mucosal and epithelial immune defense. Staining of formalin-fixed tissues requires boiling tissue sections in pH 9 10 mM Tris with 1 mM EDTA for 10-20 minutes followed by cooling at RT for 20 minutes.

Description

CD1 molecule alpha 1 (CD1A) is a membrane glycoprotein encoded by the CD1A gene that plays a key role in antigen presentation within mucosal and epithelial environments. CD1A antibody, also referred to as CD1a antibody or T-cell surface glycoprotein CD1a antibody, enables detection of dendritic cells involved in mucosal immune defense. CD1A Antibody is particularly valuable for studying immune responses at mucosal surfaces where continuous exposure to environmental antigens requires tightly regulated immune activity.

Mucosal tissues, including the respiratory, gastrointestinal, and genitourinary tracts, are primary sites of antigen exposure and host-pathogen interaction. Dendritic cells expressing CD1a are strategically positioned within these tissues to capture, process, and present lipid antigens to T cells, contributing to both immune activation and tolerance. Detection of CD1a therefore provides insight into the distribution and functional state of immune cells within mucosal environments.

In tissue-based analyses, CD1a-positive cells are observed within mucosal epithelia and associated lymphoid structures, where they interact with epithelial cells and coordinate immune responses. Their localization reflects their role in maintaining barrier integrity and regulating responses to commensal and pathogenic stimuli. A CD1a antibody enables visualization of these cells within intact tissue architecture, supporting analysis of mucosal immune organization.

Alterations in mucosal immunity are associated with infection, chronic inflammation, and immune dysregulation. Changes in CD1a-positive cell populations can reflect shifts in immune balance, including increased immune activation or impaired tolerance. Detection of CD1A can therefore be used to assess how mucosal immune systems respond to environmental challenges and maintain homeostasis.

CD1A Antibody is therefore well suited for studies focused on mucosal immunity and epithelial immune defense. Its use supports identification of dendritic cells within mucosal tissues and enables investigation of immune mechanisms that regulate barrier function, antigen recognition, and host protection.

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 / Mucosal Immunity Marker Antibody to be titered up or down for optimal performance.

Immunogen

Recombinant human protein was used as the immunogen for this CD1A Antibody / Mucosal Immunity Marker Antibody.

Storage

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

Alternate Names

CD1a antibody, mucosal immune marker antibody, CD1A epithelial immune antibody, dendritic cell mucosal marker antibody, T-cell surface glycoprotein CD1a antibody

References (4)