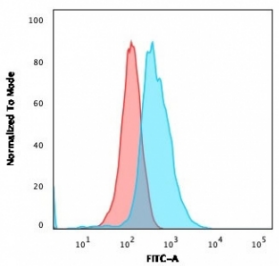
CD1a Antibody [clone O10] (V2025)

Catalog No.	Formulation	Size
V2025-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V2025-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V2025SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug
V2025IHC-7ML	Prediluted in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide; *For IHC use only*	7 ml

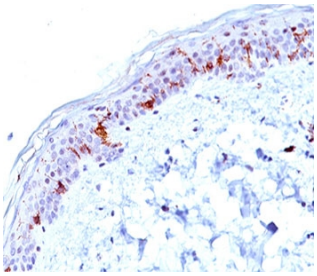
Citations (10)

Bulk quote request

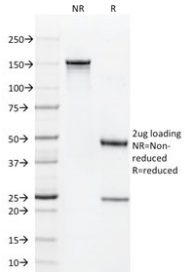
Species Reactivity	Human
Format	Purified
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	O10
Purity	Protein G affinity chromatography
Buffer	1X PBS, pH 7.4
Gene ID	909
Localization	Cell surface, cytoplasmic
Applications	Flow Cytometry : 1-2ug/million cells Immunofluorescence : 1-2ug/ml Western Blot : 0.5-1ug/ml Immunohistochemistry (FFPE) : 1-2ug/ml for 30 min at RT
Limitations	This **CD1a antibody** is available for research use only.



Flow cytometry testing of human Molt-4 cells with CD1a antibody (clone O10); Red=isotype control, Blue= CD1a antibody.



IHC testing of human skin stained with CD1a antibody (O10).



SDS-PAGE analysis of purified, BSA-free CD1a antibody (clone O10) as confirmation of integrity and purity.

Description

CD1a antibody clone O10 is a monoclonal antibody that recognizes the CD1a glycoprotein, a member of the CD1 family structurally related to MHC class I molecules. CD1a is expressed mainly on cortical thymocytes and Langerhans cells, playing a key role in lipid antigen presentation to T cells. This process allows the immune system to recognize microbial lipids and self-lipid antigens, supporting both innate and adaptive immune responses. NSJ Bioreagents provides CD1a antibody clone O10 for reliable detection of this important immune marker in immunology and pathology research.

The antibody produces strong membranous staining in thymic cortical epithelial cells and Langerhans cells of the skin, where CD1a expression is highest. In diagnostic pathology, it is a standard tool for identifying Langerhans cell histiocytosis, a condition characterized by the proliferation of CD1a positive histiocytes. Detection with this antibody allows clinicians to confirm diagnosis and distinguish it from other histiocytic disorders.

In immunology research, CD1a antibody clone O10 supports studies of lipid antigen presentation. CD1a presents glycolipids and other lipid-based antigens to T cells, thereby regulating immune responses to microbial infections such as mycobacterial disease. By detecting CD1a expression, researchers gain insight into the mechanisms of lipid antigen recognition and T cell activation.

The antibody has also been used in oncology, particularly in studies of dendritic cell tumors and T cell lymphomas. Its ability to label CD1a positive cells makes it valuable for classifying hematopoietic neoplasms. In dermatopathology, CD1a detection is central for differentiating benign skin lesions from those involving Langerhans cells.

Validated across tissue-based and cell-based systems, the antibody provides strong and reproducible membranous staining. Alternate names include T6 antibody, cortical thymocyte antigen antibody, and MHC class I-like antigen antibody.

Application Notes

The concentration stated for each application is a general starting point. Variations in protocols, secondaries and substrates may require the CD1a antibody to be titered up or down for optimal performance.

1. Staining of formalin-fixed tissues requires boiling tissue sections in 10mM Citrate Buffer, pH 6, or pH 9 10mM Tris with 1mM EDTA, for 10-20 min followed by cooling at RT for 20 minutes.
2. 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

Human thymus cells were used as the immunogen for this CD1a antibody.

Storage

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

Alternate Names

Epidermal dendritic cell marker, T cell surface antigen T6 / Leu 6

References (4)