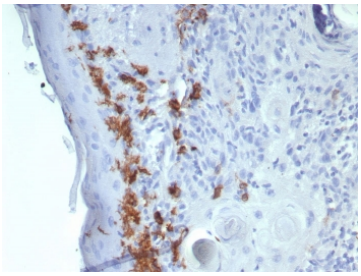
CD1A Antibody / Thymocyte Development Marker Antibody [clone C1A/8111R] (V4751)

Catalog No.	Formulation	Size
V4751-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V4751-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V4751SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Recombinant RABBIT MONOCLONAL

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG, kappa
Clone Name	C1A/8111R
Purity	Protein A/G affinity
UniProt	P06126
Localization	Cell surface
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. 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 within the epithelial layer reflects expression in immature antigen-presenting cells and supports identification of early-stage immune cell populations associated with thymocyte-related differentiation pathways. 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 membrane glycoprotein encoded by the CD1A gene that functions in antigen

presentation and is prominently expressed in cortical thymocytes during early stages of T-cell development. CD1A antibody, also referred to as CD1a antibody or T-cell surface glycoprotein CD1a antibody, enables detection of CD1A expression in studies of thymic biology and lymphocyte maturation. CD1A Antibody is particularly valuable for identifying developing T-cell populations and examining thymocyte differentiation within the thymus.

During thymic development, T-cell precursors undergo a series of maturation steps within the thymic cortex, where CD1a expression is strongly upregulated. This expression marks immature thymocytes undergoing selection processes that shape the developing T-cell repertoire. CD1A therefore serves as a useful marker for distinguishing early-stage thymocytes from more mature T cells found in the thymic medulla and peripheral lymphoid organs.

In histological analysis, CD1a-positive cells are observed in the thymic cortex with prominent membranous and cytoplasmic staining, reflecting high levels of expression during active stages of T-cell differentiation. This spatial distribution allows clear delineation of thymic architecture and supports analysis of developmental zones within the thymus. A CD1a antibody enables visualization of these patterns and facilitates study of thymocyte maturation within intact tissue sections.

Changes in thymocyte development are associated with immune system disorders, including immunodeficiency, autoimmune disease, and alterations in T-cell selection processes. Detection of CD1a can therefore be used to evaluate developmental abnormalities and to study factors that influence T-cell maturation and immune competence.

CD1A Antibody is therefore well suited for studies focused on thymocyte development and T-cell differentiation. Its use supports identification of immature T-cell populations and enables investigation of cellular processes that regulate thymic maturation, immune system development, and the formation of functional T-cell repertoires.

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 / Thymocyte Development Marker Antibody should be determined by the researcher.

Immunogen

Recombinant full-length human CD1a protein was used as the immunogen for the CD1A Antibody / Thymocyte Development Marker Antibody.

Storage

Aliquot the CD1A antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

CD1a antibody, thymocyte marker antibody, CD1A T-cell development antibody, cortical thymocyte marker antibody, T-cell surface glycoprotein CD1a antibody

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