

PRODUCT INFORMATION



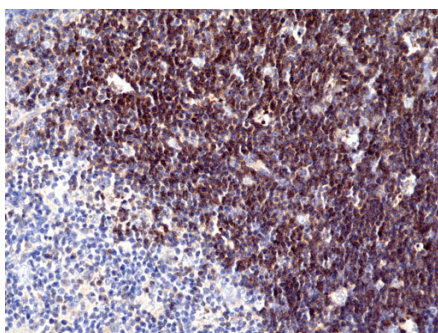
CD1a (N-Term) Rabbit Monoclonal Antibody (RM393)

Item No. 32322

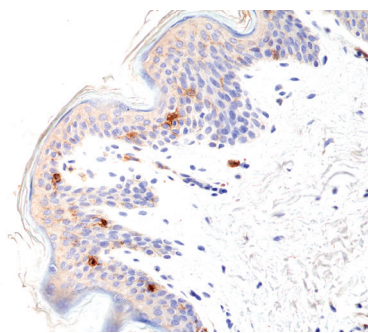
Overview and Properties

Contents:	This vial contains 100 µl of protein A-affinity purified monoclonal antibody.
Synonyms:	Cluster of Differentiation 1a, T Cell Surface Glycoprotein CD1a
Immunogen:	Peptide from the N-terminal region of human CD1a
Cross Reactivity:	(+) CD1a
Species Reactivity:	(+) Human
Form:	Liquid
Storage:	-20°C
Stability:	≥1 year
Storage Buffer:	PBS with 50% glycerol, 1% BSA, and 0.09% sodium azide
Clone:	RM393
Host:	Rabbit
Isotype:	IgG
Applications:	Immunohistochemistry; the recommended starting dilution is 1:100-1:200. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Images



Immunohistochemical staining of formalin-fixed and paraffin-embedded human thymus tissue using CD1a (N-Term) Rabbit Monoclonal Antibody (RM393) at a 1:100 dilution.



Immunohistochemical staining of formalin-fixed and paraffin-embedded human skin tissue using CD1a (N-Term) Rabbit Monoclonal Antibody (RM393) at a 1:100 dilution.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM

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Description

CD1a is a transmembrane glycoprotein and member of the CD1 family.¹ CD1a exists as a heterodimer where each monomer is composed of a transmembrane CD1 heavy chain that contains three extracellular domains ($\alpha 1$ - $\alpha 3$), which associate with $\beta 2$ -microglobulin to form a lipid-binding groove, as well as a short cytoplasmic tail that lacks the typical CD1 family tyrosine-containing hydrophobic motif that localizes other CD1 molecules to endosomes and lysosomes.² It is primarily expressed on, and has been used as a marker for, dendritic cells and is also expressed on thymocytes and Langerhans cells and localizes to the cell surface.^{1,2} CD1a binds to self- and foreign lipids and glycolipids and presents them to group 1 CD1-restricted T cells.¹ It is a receptor for urushiol, a plant-derived allergen, and mediates its inflammatory skin response, as well as the inflammation induced by self-lipid antigens in patients with psoriasis.³ The density of CD1a protein in patient-derived tumor tissue is associated with improved clinical outcomes and survival.¹ Cayman's CD1a (N-Term) Rabbit Monoclonal Antibody (RM393) can be used for immunohistochemistry (IHC).

References

1. Coventry, B. and Heinzl, S. CD1a in human cancers: A new role for an old molecule. *Trends Immunol.* **25(5)**, 242-248 (2004).
2. Zajonc, D.M., Elsliger, M.A., Teyton, L., *et al.* Crystal structure of CD1a in complex with a sulfatide self antigen at a resolution of 2.15 Å. *Nat. Immunol.* **4(8)**, 808-815 (2003).
3. Kim, J.H., Hu, Y., Yongqing, T., *et al.* CD1a on Langerhans cells controls inflammatory skin disease. *Nat. Immunol.* **17(10)**, 1159-1166 (2016).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
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[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
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