**BACKGROUND**

The CD1 multigene family encodes five forms of the CD1 T-cell surface glycoprotein in human, designated CD1A, 1B, 1C, 1D and 1E. CD1, a type 1 membrane protein, has structural similarity to the MHC class I antigen and has been shown to present lipid antigens for recognition by T lymphocytes. CD1 antigens are associated with β2-Microglobulin and expressed on cortical thymocytes, Langerhans cells, a B cell subset and some dendritic cells. Specifically, CD1A is a marker for Langerhans cell histiocytosis (LCH) and is found on interdigitating cells. Adaptor-protein complexes and CD1-associated chaperones control CD1 trafficking, and the development and activation of CD1-restricted T cells. Constitutive endocytosis of CD1B molecules and the differential sorting of MHC class II from lysosomes separate peptide- and lipid antigen-presenting molecules during dendritic cell maturation. CD1B is also expressed in interdigitating cells. The human CD1 genes are all closely linked in a cluster mapping at chromosome 1q23.1.

**CHROMOSOMAL LOCATION**

Genetic locus: CD1A (human) mapping to 1q23.1.

**SOURCE**

CD1A (O10) is a mouse monoclonal antibody raised against human thymus cells.

**PRODUCT**

Each vial contains 200 µg IgG1 kappa light chain in 1.0 ml of PBS with <0.1% sodium azide and 0.1% gelatin.

CD1A (O10) is available conjugated to agarose (sc-18885 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-18885 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-18885 PE), fluorescein (sc-18885 FITC), Alexa Fluor® 488 (sc-18885 AF488), Alexa Fluor® 546 (sc-18885 AF546), Alexa Fluor® 594 (sc-18885 AF594) or Alexa Fluor® 647 (sc-18885 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-18885 AF680) or Alexa Fluor® 790 (sc-18885 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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**APPLICATIONS**

CD1A (O10) is recommended for detection of CD1A of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation (1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for CD1A siRNA (h): sc-42744, CD1A shRNA Plasmid (h): sc-24744-SH and CD1A shRNA (h) Lentiviral Particles: sc-24744-V.

Molecular Weight of CD1A: 49 kDa.

Positive Controls: MOLT-4 cell lysate: sc-2233 or human fetal thymus tissue extract.

**STORAGE**

Store at 4°C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

**SELECT PRODUCT CITATIONS**


**RESEARCH USE**

For research use only, not for use in diagnostic procedures.

**PROTOCOLS**

See our web site at www.scbt.com for detailed protocols and support products.