

# CD1B (3F66): sc-70569

## 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  $\beta$ -2-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 1q 22-23.

## REFERENCES

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## STORAGE

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

## CHROMOSOMAL LOCATION

Genetic locus: CD1B (human) mapping to 1q23.1.

## SOURCE

CD1B (3F66) is a mouse monoclonal antibody raised against membrane antigen preparation of thymocytes of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CD1B (3F66) is available conjugated to either phycoerythrin (sc-70569 PE) or fluorescein (sc-70569 FITC), 200  $\mu$ g/ml, for IF, IHC(P) and FCM.

## APPLICATIONS

CD1B (3F66) is recommended for detection of CD1B of human origin by immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1  $\mu$ g per 1 x 10<sup>6</sup> cells).

Suitable for use as control antibody for CD1B siRNA (h): sc-42745, CD1B shRNA Plasmid (h): sc-42745-SH and CD1B shRNA (h) Lentiviral Particles: sc-42745-V.

Molecular Weight of CD1B: 45 kDa.

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:  
 1) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).  
 2) Immunofluorescence: use m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.