

# CD1B3 (CC122): sc-101831

## 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 is a type I membrane protein that has structural similarity to the MHC class I antigen and is present on lipid antigens for recognition by T lymphocytes. CD1 antigens are associated with  $\beta$ -2-Microglobulin and are expressed on cortical thymocytes, Langerhans cells, a B cell subset and a few dendritic cells. Adaptor-protein complexes and CD1-associated chaperones control CD1 trafficking, as well as 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. CD1B3 is a 333 amino acid member of the CD1 multigene family.

## REFERENCES

- Martin, L.H., Calabi, F., Lefebvre, F.A., Bilslund, C.A. and Milstein, C. 1987. Structure and expression of the human thymocyte antigens CD1A, CD1C, and CD1E. *Proc. Natl. Acad. Sci. USA* 84: 9189-9193.
- Aruffo, A. and Seed, B. 1989. Expression of cDNA clones encoding the thymocyte antigens CD1A, B, C demonstrates a hierarchy of exclusion in fibroblasts. *J. Immunol.* 143: 1723-1730.
- Longley, J., Krause, J., Alonso, M. and Edelson, R. 1989. Molecular cloning of CD1A (T6), a human epidermal dendritic cell marker related to class I MHC molecules. *J. Invest. Dermatol.* 92: 628-631.
- Sotzik, F., Boyd, A. and Shortman, K. 1993. Surface antigens of human thymocyte populations defined by CD3, CD4 and CD8 expression: CD1A is expressed by mature thymocytes but not peripheral T cells. *Immunol. Lett.* 36: 101-106.
- Porcelli, S.A. 1995. The CD1 family: a third lineage of antigen-presenting molecules. *Adv. Immunol.* 59: 1-98.

## SOURCE

CD1B3 (CC122) is a mouse monoclonal antibody raised against thymocytes of bovine 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.

CD1B3 (CC122) is available conjugated to agarose (sc-101831 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-101831 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-101831 PE), fluorescein (sc-101831 FITC), Alexa Fluor<sup>®</sup> 488 (sc-101831 AF488), Alexa Fluor<sup>®</sup> 546 (sc-101831 AF546), Alexa Fluor<sup>®</sup> 594 (sc-101831 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-101831 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-101831 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-101831 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

## RESEARCH USE

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

## APPLICATIONS

CD1B3 (CC122) is recommended for detection of CD1B3 of human, bovine and ovine origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)] and flow cytometry (1  $\mu$ g per 1 x 10<sup>6</sup> cells).

CD1B3 (CC122) is also recommended for detection of CD1B3 in additional species, including bovine and ovine.

Molecular Weight of ovine CD1B3: 26 kDa.

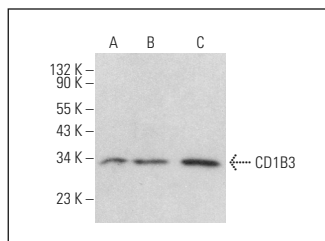
Molecular Weight of bovine CD1B3: 37 kDa.

Positive Controls: ALL-SIL whole cell lysate: sc-364356, CCRF-CEM cell lysate: sc-2225 or SUP-T1 whole cell lysate: sc-364796.

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

## DATA



CD1B3 (CC122): sc-101831. Western blot analysis of CD1B3 expression in ALL-SIL (A), CCRF-CEM (B) and SUP-T1 (C) whole cell lysates.

## STORAGE

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

## PROTOCOLS

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

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