

CD1D (Y-17): sc-22608

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 β -2-Microglobulin and expressed on cortical thymocytes, Langerhans cells, a B cell subset and some dendritic cells. Adaptor protein complexes and CD1-associated chaperones control CD1 trafficking and the development and activation of CD1-restricted T cells. CD1D is present on human intestinal epithelial cells (IEC) and exists as a β -2-Microglobulin-independent nonglycosylated form or a β -2-Microglobulin-dependent glycosylated form. The human CD1D gene maps to chromosome 1q23.1 and encodes a 335 amino acid protein that influences normal T cell maturation.

REFERENCES

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3. Bilslund, C.A. and Milstein, C. 1991. The identification of the β 2-microglobulin binding antigen encoded by the human CD1D gene. *Eur. J. Immunol.* 21: 71-78.
4. Balk, S.P., Burke, S., Polischuk, J.E., Frantz, M.E., Yang, L., Porcelli, S., Colgan, S.P. and Blumberg, R.S. 1994. β 2-microglobulin-independent MHC class Ib molecule expressed by human intestinal epithelium. *Science* 265: 259-262.
5. Kim, H.S., Colgan, S.P., Pitman, R., Hershberg, R.M. and Blumberg, R.S. 2000. Human CD1D associates with prolyl-4-hydroxylase during its biosynthesis. *Mol. Immunol.* 37: 861-868.
6. Joyce, S. 2001. CD1D and natural T cells: how their properties jump-start the immune system. *Cell. Mol. Life Sci.* 58: 442-469.

CHROMOSOMAL LOCATION

Genetic locus: Cd1d2 (mouse) mapping to 3 F1.

SOURCE

CD1D (Y-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of CD1D of mouse origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-22608 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

CD1D (Y-17) is recommended for detection of CD1D of mouse, rat and mink origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for CD1 siRNA (m): sc-42743, CD1 shRNA Plasmid (m): sc-42743-SH and CD1 shRNA (m) Lentiviral Particles: sc-42743-V.

Molecular Weight of CD1D: 37 kDa.

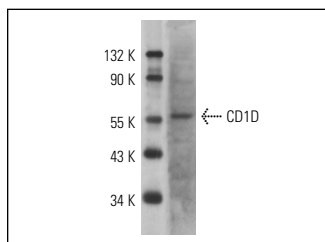
Molecular Weight of glycosylated CD1D: 50-55 kDa.

Positive Controls: Mv 1 Lu cell lysate: sc-3810.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



CD1D (Y-17): sc-22608. Western blot analysis of CD1D expression in Mv 1 Lu whole cell lysate.

RESEARCH USE

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

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Try **CD1D (G-12): sc-373858**, our highly recommended monoclonal alternative to CD1D (Y-17).