SANTA CRUZ BIOTECHNOLOGY, INC.

CD15 (HI98): sc-19649

SANTA CRUZ BIOTECHNOLOGY
The Power to Question

BACKGROUND

Fucosyltransferases (FucTs) catalyze the covalent association of fucose to different positional linkages on sugar acceptor molecules. The carbohydrate moieties that are generated are covalently attached to cell surfaces and are necessary to ensure a surface contour that satisfies a variety of physiological roles. CD15, also known as Lewis X or LeX, is a carbohydrate antigen that is generated by FucT-IV (α 1,3-fucosyltransferase IV). Commonly found on the surface of leukocytes and some tumor cells, CD15 is a trisaccharide that is synthesized when FucT-IV transfers an α-fucose residue onto the β-GlcNAc moiety of cellular N-acetyllactosamines. CD15 functions as an adhesion molecule capable of calcium-mediated homotypic binding. Cells with high surface expression of CD15, therefore, exhibit strong self-aggregation (based on CD15-CD15 interaction) in the presence of calcium. Additionally, CD15 is thought to be a ligand for selectins (proteins involved in mediating leukocyte-specific cellular interactions), further supporting its role as a cell-adhesion protein.

REFERENCES

1. Eggens, I., et al. 1989. Specific interaction between Lex and Lex determinants. A possible basis for cell recognition in preimplantation embryos and in embryonal carcinoma cells. J. Biol. Chem. 264: 9476-9484.
2. Hakomori, S. 1992. Lex and related structures as adhesion molecules. Histochem. J. 24: 771-776.
3. Nimgaonkar, M., et al. 1996. A combination of CD34 selection and complement-mediated immunopurging (anti-CD15 monoclonal antibody) eliminates tumor cells while sparing normal progenitor cells. J. Hematother. 5: 39-48.

CHROMOSOMAL LOCATION

Genetic locus: FUT4 (human) mapping to 11q21; Fut4 (mouse) mapping to 9 A2.

SOURCE

CD15 (HI98) is a mouse monoclonal antibody raised against CD15 of human origin.

PRODUCT

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

CD15 (HI98) is available conjugated to either phycoerythrin (sc-19649 PE) or fluorescein (sc-19649 FITC), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM.

APPLICATIONS

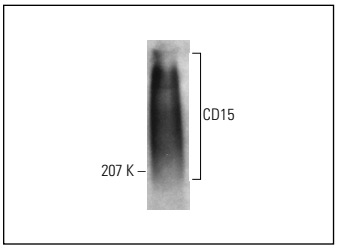
CD15 (HI98) is recommended for detection of CD15 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10^6 cells).

Positive Controls: F9 cell lysate: sc-2245, H69AR whole cell lysate: sc-364382 or mouse kidney extract: sc-2255.

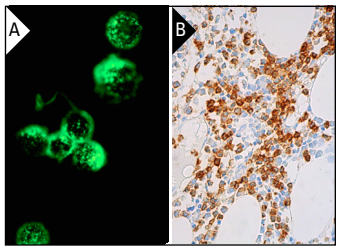
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



CD15 (HI98): sc-19649. Western blot analysis of CD15 expression in mouse kidney tissue extract.



CD15 (HI98): sc-19649. Immunofluorescence staining of methanol-fixed HL-60 cells showing membrane staining (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human bone marrow tissue showing cytoplasmic staining of subset of hematopoietic cells (**B**).

SELECT PRODUCT CITATIONS

1. Hong, J., et al. 2003. Apicidin, a histone deacetylase inhibitor, induces differentiation of HL-60 cells. Cancer Lett. 189: 197-206.
2. Venkatakrishnan, V., et al. 2020. Glycan analysis of human neutrophil granules implicates a maturation-dependent glycosylation machinery. J. Biol. Chem. 295: 12648-12660.

STORAGE

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

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.

CONJUGATES

See **CD15 (C3D-1): sc-19648** for CD15 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.