SANTA CRUZ BIOTECHNOLOGY, INC.

CD60b (UM4D4): sc-32269

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

CD60b (formally called CDw60) is a 9-O-acetylated form of GD3 ganglioside. The CD60b antigen is expressed on peripheral blood T cells, monocytes, platelets, synovial fibroblasts and some cell lines. Cytotoxic T cells, T helper cells and IL-4-producing cells are the T cell subsets that express CD60b. It is hypothesized that CD60b may provide costimulatory signals for T cells. After stimulation of naive $CD45RA^+$ T cells, the CD60b antigen is upregulated, corresponding with the switch from $CD45RA^+$ to $CD45RO^+$. $CD34^+$ hematopoietic precursor cells have been shown to be CD60b positive.

REFERENCES

1. Knapp, W., et al, eds. 1989. Leucocyte Typing IV: White Cell Differentiation Antigens. New York: Oxford University Press.
2. Fox, D., et al. 1990. Activation pathways of synovial T lymphocytes. Expression and function of the UMD4D4/CDw60 antigen. J. Clin. Invest. 86: 1124.
3. Kniep, B., et al. 1992. CDw60 antibodies bind to acetylated forms of ganglioside GD3. Biochem. Biophys. Res. Commun. 187: 1343.
4. Semnani, R., et al. 1994. Costimulation by purified intercellular adhesion molecule 1 and lymphocytes function-associated antigen 3 induces distinct proliferation, cytokine and cell surface antigen profiles in human "naive" and "memory" $CD4^+$ T cells. J. Exp. Med. 180: 2125.
5. Schlossman, S., et al, eds. 1995. Leucocyte Typing V: White Cell Differentiation Antigens. New York: Oxford University Press.
6. Barclay, A., et al. 1997. The Leukocyte Antigen Facts Book. San Diego, California: Academic Press, Inc., 192.
7. Mason, D., et al. 2002. Leucocyte typing VII. Oxford University Press, New York.

SOURCE

CD60b (UM4D4) is a mouse monoclonal antibody raised against human rheumatoid synovial T cell line (ST-1) cells.

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.

CD60b (UM4D4) is available conjugated to either phycoerythrin (sc-32269 PE) or fluorescein (sc-32269 FITC), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM.

STORAGE

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

APPLICATIONS

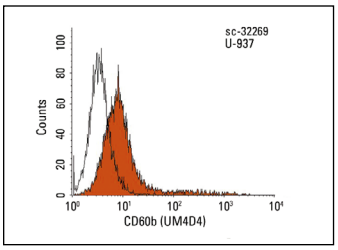
CD60b (UM4D4) is recommended for detection of CD60b of human origin by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10^6 cells).

Molecular Weight of CD60b: 75 kDa.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) 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.

DATA



CD60b (UM4D4): sc-32269. Indirect FCM analysis of U-937 cells stained with CD60b (UM4D4), followed by PE-conjugated goat anti-mouse IgM: sc-3768. Black line histogram represents the isotype control, normal mouse IgM: sc-3881.

SELECT PRODUCT CITATIONS

1. Ribeiro-Resende, V.T., et al. 2014. Mice lacking GD3 synthase display morphological abnormalities in the sciatic nerve and neuronal disturbances during peripheral nerve regeneration. PLoS ONE 9: e108919.
2. Baumann, A.M., et al. 2015. 9-O-Acetylation of sialic acids is catalysed by CASD1 via a covalent acetyl-enzyme intermediate. Nat. Commun. 6: 7673.
3. Abreu, C.A., et al. 2021. GD3 synthase deletion alters retinal structure and impairs visual function in mice. J. Neurochem. 158: 694-709.

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.