SANTA CRUZ BIOTECHNOLOGY, INC.

CD88 (8D6): sc-53788

BACKGROUND

CD88, also called C5a receptor (C5aR), is a G protein-coupled integral membrane protein. CD88, which is expressed on neutrophils, monocytes, macrophages, hepatocytes and mast cells, as well as on various epithelial and endothelial cells, serves as a receptor for the inflammatory peptide C5a. Research studies suggest a role for CD88 in the inflammatory response. The binding of C5a to CD88 has been shown to elicit increased production of acute phase proteins in liver, and in brain, an increased production of CD88 has been shown to be associated with inflammation. Research also indicates a role for C5a/C5aR in the pathogenesis of rheumatoid arthritis, and a heightened responsiveness of human bronchial epithelial cells (HBECs) to the C5a on exposure of these cells to cigarette smoke and other environmental irritants.

REFERENCES

1. Hugli, T.E., et al. 1978. Anaphylatoxins: C3a and C5a. Adv. Immunol. 26: 1-53.
2. Gerard, N.P., et al. 1991. The chemotactic receptor for human C5a anaphylatoxin. Nature 349: 614-617.
3. Haviland, D.L., et al. 1995. Cellular expression of the C5a anaphylatoxin receptor (C5aR): demonstration of C5aR on nonmyeloid cells of the liver and lung. J. Immunol. 154: 1861-1869.

CHROMOSOMAL LOCATION

Genetic locus: C5AR1 (human) mapping to 19q13.32; C5ar1 (mouse) mapping to 7 A2.

SOURCE

CD88 (8D6) is a rat monoclonal antibody raised against CD88 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CD88 (8D6) is available conjugated to either phycoerythrin (sc-53788 PE) or fluorescein (sc-53788 FITC), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM.

APPLICATIONS

CD88 (8D6) is recommended for detection of CD88 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) and flow cytometry (1 µg per 1 x 10^6 cells).

Suitable for use as control antibody for CD88 siRNA (h): sc-35031, CD88 siRNA (m): sc-42814, CD88 shRNA Plasmid (h): sc-35031-SH, CD88 shRNA Plasmid (m): sc-42814-SH, CD88 shRNA (h) Lentiviral Particles: sc-35031-V and CD88 shRNA (m) Lentiviral Particles: sc-42814-V.

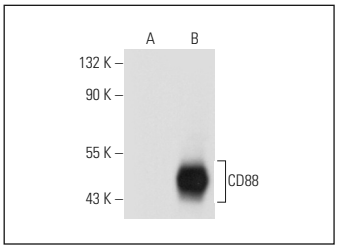
Molecular Weight of CD88: 49 kDa.

Positive Controls: CD88 (h): 293 Lysate: sc-110903, HeLa whole cell lysate: sc-2200 or U-937 cell lysate: sc-2239.

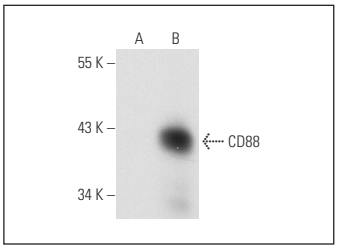
STORAGE

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

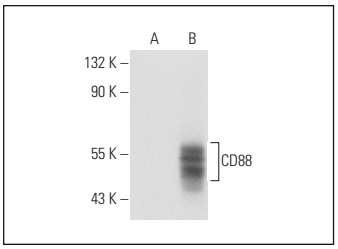
DATA



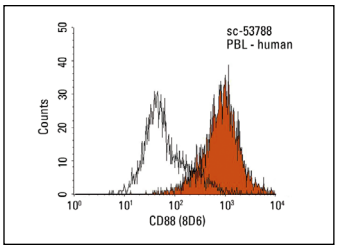
CD88 (8D6): sc-53788. Western blot analysis of CD88 expression in non-transfected: sc-117752 (**A**) and human CD88 transfected: sc-175354 (**B**) 293T whole cell lysates.



CD88 (8D6): sc-53788. Western blot analysis of CD88 expression in non-transfected: sc-110760 (**A**) and human CD88 transfected: sc-110903 (**B**) 293 whole cell lysates.



CD88 (8D6): sc-53788. Western blot analysis of CD88 expression in non-transfected: sc-117752 (**A**) and human CD88 transfected: sc-158362 (**B**) 293T whole cell lysates.



CD88 (8D6): sc-53788. Indirect FCM analysis of human peripheral blood leukocytes stained with CD88 (8D6), followed by PE-conjugated goat anti-mouse IgG: sc-3738. Black line histogram represents the isotype control, normal rat IgG_{2a}: sc-3878.

SELECT PRODUCT CITATIONS

1. Luchini, L.S.G., et al. 2019. Complement system inhibition modulates the pro-inflammatory effects of a snake venom metalloproteinase. Front. Immunol. 10: 1137.
2. Gonçalves, M.T., et al. 2020. P-MAPA, a fungi-derived immunomodulatory compound, induces a proinflammatory response in a human whole blood model. Mediators Inflamm. 2020: 8831389.
3. Brandolini, L., et al. 2022. Paclitaxel binds and activates C5aR1: a new potential therapeutic target for the prevention of chemotherapy-induced peripheral neuropathy and hypersensitivity reactions. Cell Death Dis. 13: 500.
4. Gabrili, J.J.M., et al. 2022. Complement system inhibition modulates the inflammation induced by the venom of *Premolis semirufa*, an Amazon Rainforest moth caterpillar. Int. J. Mol. Sci. 23: 13333.

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.