SANTA CRUZ BIOTECHNOLOGY, INC.

CD88 (S5/1): sc-53795

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

CD88, also known as 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. 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, as well as a heightened responsiveness of human bronchial epithelial cells (HBECs) to C5a upon exposure of these cells to cigarette smoke and other environmental irritants.

CHROMOSOMAL LOCATION

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

SOURCE

CD88 (S5/1) is a mouse monoclonal antibody raised against a synthetic peptide corresponding to N-terminal amino acids 1-31 of CD88 of human origin.

PRODUCT

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

CD88 (S5/1) is available conjugated to either phycoerythrin (sc-53795 PE) or fluorescein (sc-53795 FITC), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM.

RESEARCH USE

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

APPLICATIONS

CD88 (S5/1) 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), 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).

CD88 (S5/1) is also recommended for detection of CD88 in additional species, including bovine and rabbit.

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.

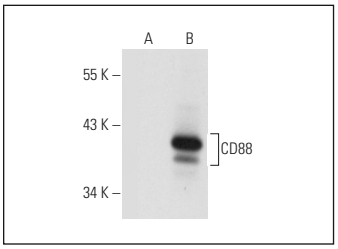
Molecular Weight of CD88: 49 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, U-937 cell lysate: sc-2239 or CD88 (h3): 293T Lysate: sc-158362.

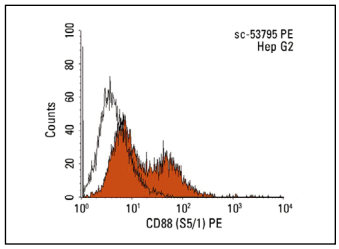
RECOMMENDED SUPPORT REAGENTS

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 A/G PLUS-Agarose: sc-2003 (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



CD88 (S5/1): sc-53795. Western blot analysis of CD88 expression in non-transfected: sc-117752 (**A**) and human CD88 transfected: sc-158362 (**B**) 293T whole cell lysates.



CD88 (S5/1) PE: sc-53795 PE. FCM analysis of Hep G2 cells. Black line histogram represents the isotype control, normal mouse IgG_{2a}-PE: sc-2867.

SELECT PRODUCT CITATIONS

1. Asgari, E., et al. 2013. C3a modulates IL-1β secretion in human monocytes by regulating ATP efflux and subsequent NLRP3 inflammasome activation. Blood 122: 3473-3481.
2. Moreno-Fernandez, M.E., et al. 2016. A novel role for the receptor of the complement cleavage fragment C5a, C5aR1, in CCR5-mediated entry of HIV into macrophages. AIDS Res. Hum. Retroviruses 32: 399-408.
3. Panayiotou, E., et al. 2017. C1q ablation exacerbates amyloid deposition: a study in a transgenic mouse model of ATTRV30M amyloid neuropathy. PLoS ONE 12: e0175767.
4. Arbore, G., et al. 2018. Complement receptor CD46 co-stimulates optimal human $CD8^+$ T cell effector function via fatty acid metabolism. Nat. Commun. 9: 4186.
5. Panayiotou, E., et al. 2019. C5aR agonist enhances phagocytosis of fibrillar and non-fibrillar Aβ amyloid and preserves memory in a mouse model of familial Alzheimer's disease. PLoS ONE 14: e0225417.
6. Cao, D., et al. 2022. Vascular endothelial cells produce coagulation factors that control their growth via joint protease-activated receptor and C5a receptor 1 (CD88) signaling. Am. J. Pathol. 192: 361-378.

STORAGE

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