

CD88 (B-6): sc-271949

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.

SOURCE

CD88 (B-6) is a mouse monoclonal antibody raised against amino acids 251-350 of CD88 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CD88 (B-6) is available conjugated to agarose (sc-271949 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271949 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271949 PE), fluorescein (sc-271949 FITC), Alexa Fluor[®] 488 (sc-271949 AF488), Alexa Fluor[®] 546 (sc-271949 AF546), Alexa Fluor[®] 594 (sc-271949 AF594) or Alexa Fluor[®] 647 (sc-271949 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-271949 AF680) or Alexa Fluor[®] 790 (sc-271949 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

CD88 (B-6) is recommended for detection of CD88 of human origin by Western Blotting (starting dilution 1:100, 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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

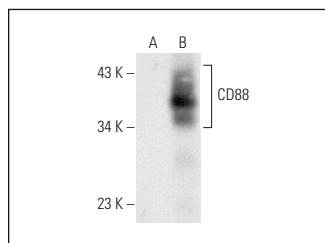
Molecular Weight of CD88: 49 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, U-937 cell lysate: sc-2239 or CD88 (h): 293T Lysate: sc-175352.

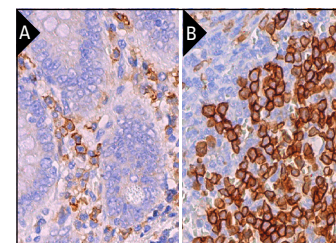
RECOMMENDED SUPPORT REAGENTS

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 (B-6): sc-271949. Western blot analysis of CD88 expression in non-transfected: sc-117752 (A) and human CD88 transfected: sc-175352 (B) 293T whole cell lysates.



CD88 (B-6): sc-271949. Immunoperoxidase staining of formalin fixed, paraffin-embedded human appendix tissue showing membrane and cytoplasmic staining of subset of lymphoid cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human spleen tissue showing membrane and cytoplasmic staining of subset of cells in red pulp (B).

SELECT PRODUCT CITATIONS

- Zhang, Y., et al. 2018. Apigenin inhibits C5a-induced proliferation of human nasopharyngeal carcinoma cells through down-regulation of C5aR. *Biosci. Rep.* 38: BSR20180456.
- Jeon, Y., et al. 2023. FBXO11 governs macrophage cell death and inflammation in response to bacterial toxins. *Life Sci. Alliance* 6: e202201735.
- Li, X., et al. 2024. C5aR1 inhibition reprograms tumor associated macrophages and reverses PARP inhibitor resistance in breast cancer. *Nat. Commun.* 15: 4485.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

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