

# CD88 (P12/1): sc-53794

## 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.

## REFERENCES

- Hugli, T.E. and Muller-Eberhard, H.J. 1978. Anaphylatoxins: C3a and C5a. *Adv. Immunol.* 26: 1-53.
- 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.
- Fureder, W., et al. 1995. Differential expression of complement receptors on human basophils and mast cells. Evidence for mast cell heterogeneity and CD88/C5aR expression on skin mast cells. *J. Immunol.* 155: 3152-3160.

## CHROMOSOMAL LOCATION

Genetic locus: C5AR1 (human) mapping to 19q13.32.

## SOURCE

CD88 (P12/1) is a mouse monoclonal antibody raised against synthetic peptide corresponding to N-terminal amino acids 1-31 of CD88 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CD88 (P12/1) is available conjugated to either phycoerythrin (sc-53794 PE) or fluorescein (sc-53794 FITC), 200 µg/ml, for IF, IHC(P) and FCM.

## APPLICATIONS

CD88 (P12/1) is recommended for detection of CD88 of 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<sup>6</sup> cells).

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.

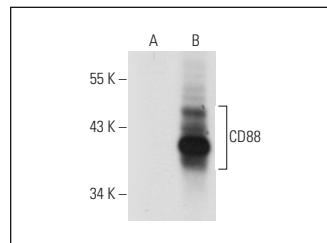
Molecular Weight of CD88: 49 kDa.

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

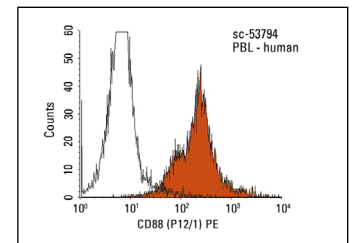
## RECOMMENDED SUPPORT REAGENTS

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.

## DATA



CD88 (P12/1): sc-53794. Western blot analysis of CD88 expression in non-transfected: sc-117752 (A) and human CD88 transfected: sc-158362 (B) 293T whole cell lysates.



p-CD88 (P12/1): sc-53794. Indirect FCM analysis of human peripheral blood leukocytes stained with p-CD88 (P12/1), followed by PE-conjugated goat anti-mouse IgG: sc-3738. Black line histogram represents the isotype control, normal mouse IgG<sub>2a</sub>: sc-3878.

## SELECT PRODUCT CITATIONS

- Groeneveld, K.M., et al. 2014. Penetrating thorax injury leads to mild systemic activation of neutrophils without inflammatory complications. *Injury* 45: 522-527.
- Ding, P., et al. 2022. Intracellular complement C5a/C5aR1 stabilizes β-catenin to promote colorectal tumorigenesis. *Cell Rep.* 39: 110851.

## 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](http://www.scbt.com) for detailed protocols and support products.