

CD88 (h3): 293T Lysate: sc-158362

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.
- Gerard, N.P. and Gerard, C. 1991. The chemotactic receptor for human C5a anaphylatoxin. *Nature* 349: 614-617.
- Haviland, D.L., McCoy, R.L., Whitehead, W.T., Akama, H., Molmenti, E.P., Brown, A., Haviland, J.C., Parks, W.C., Perlmutter, D.H. and Wetsel, R.A. 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., Agis, H., Willheim, M., Bankl, H.C., Maier, U., Kishi, K., Muller, M.R., Czerwenka, K., Radaszkiewicz, T., Butterfield, J.H., Klappacher, G.W., Sperr, W.R., Oppermann, M., Lechner, K. and Valent, P. 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.
- Elsner, J., Oppermann, M. and Kapp, A. 1996. Detection of C5a receptors on human eosinophils and inhibition of eosinophil effector functions by anti-C5a receptor (CD88) antibodies. *Eur. J. Immunol.* 26: 1560-1564.
- Gasque, P., Singhrao, S.K., Neal, J.W., Gotze, O. and Morgan, B.P. 1997. Expression of the receptor for complement C5a (CD88) is upregulated on reactive astrocytes, microglia and endothelial cells in the inflamed human central nervous system. *Am. J. Pathol.* 150: 31-41.
- Kiener, H.P., Baghestanian, M., Dominkus, M., Walchshofer, S., Ghannadan, M., Willheim, M., Sillaber, C., Graninger, W.B., Smolen, J.S. and Valent, P. 1998. Expression of the C5a receptor (CD88) on synovial mast cells in patients with rheumatoid arthritis. *Arthritis Rheum.* 41: 233-245.
- Floreani, A.A., Heires, A.J., Welniak, L.A., Miller-Lindholm, A., Clark-Pierce, L., Rennard, S.I., Morgan, E.L. and Sanderson, S.D. 1998. Expression of receptors for C5a anaphylatoxin (CD88) on human bronchial epithelial cells: enhancement of C5a-mediated release of IL-8 upon exposure to cigarette smoke. *J. Immunol.* 160: 5073-5081.
- Nataf, S., Davoust, N., Ames, R.S. and Barnum, S.R. 1999. Human T cells express the C5a receptor and are chemoattracted to C5a. *J. Immunol.* 162: 4018-4023.

CHROMOSOMAL LOCATION

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

PRODUCT

CD88 (h3): 293T Lysate represents a lysate of human CD88 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

CD88 (h3): 293T Lysate is suitable as a Western Blotting positive control for human reactive CD88 antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

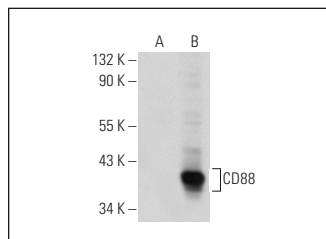
CD88 (3H1740): sc-70813 is recommended as a positive control antibody for Western Blot analysis of enhanced human CD88 expression in CD88 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

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.

DATA



CD88 (3H1740): sc-70813. Western blot analysis of CD88 expression in non-transfected: sc-117752 (A) and human CD88 transfected: sc-158362 (B) 293T whole cell lysates.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. 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 for detailed protocols and support products.