

CD89 (C-20): sc-17083

BACKGROUND

Fc (Ig constant fragment) receptors ensure protection of the host against foreign antigens, such as microorganisms and pathogens, by removing Ig-coated antigen complexes from circulation. Fc receptors are present on lymphoid and myeloid derivatives, where they mediate endocytosis of Ig-antigen complexes, antibody production in B cells through T cell antigen presentation, cytotoxicity, and the release of cytokines and reactive oxygen species. Human myeloid receptor for the Fc fragment of IgA (CD89) is a glycoprotein that is expressed on the surface of neutrophils, monocytes, macrophages and eosinophils and is a potent cytotoxic trigger molecule. Cytokines can initiate a high-binding state for CD89 through a mechanism that involves the intracellular C-terminus of CD89.

REFERENCES

1. Morton, H.C., et al. 1995. Functional association between the human myeloid immunoglobulin A Fc receptor (CD89) and FcR γ chain. Molecular basis for CD89/FcR γ chain association. *J. Biol. Chem.* 270: 29781-29787.
2. Pleass, R.J., et al. 1996. Alternative splicing of the human IgA Fc receptor CD89 in neutrophils and eosinophils. *Biochem. J.* 318: 771-777.
3. Daeron, M. 1997. Fc receptor biology. *Annu. Rev. Immunol.* 15: 203-234.
4. Amigorena, S. and Bonnerot, C. 1999. Fc receptors for IgG and antigen presentation on MHC class I and class II molecules. *Semin. Immunol.* 11: 385-390.
5. van Egmond, M., et al. 2001. Enhancement of polymorphonuclear cell-mediated tumor cell killing on simultaneous engagement of Fc γ RI (CD64) and Fc α RI (CD89). *Cancer Res.* 61: 4055-4060.
6. Geissmann, F., et al. 2001. A subset of human dendritic cells expresses IgA Fc receptor (CD89), which mediates internalization and activation upon cross-linking by IgA complexes. *J. Immunol.* 166: 346-352.
7. Smith, P.D., et al. 2001. Intestinal macrophages lack CD14 and CD89 and consequently are downregulated for LPS- and IgA-mediated activities. *J. Immunol.* 167: 2651-2656.
8. Bracke, M., et al. 2001. Cytokine-induced inside-out activation of Fc α RI (CD89) is mediated by a single serine residue (S263) in the intracellular domain of the receptor. *Blood* 97: 3478-3483.
9. LocusLink Report. <http://www.ncbi.nlm.nih.gov/LocusLink/> (LocusID: 2204).

CHROMOSOMAL LOCATION

Genetic locus: FCAR (human) mapping to 19q13.42.

SOURCE

CD89 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of CD89 of human origin.

STORAGE

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

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-17083 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

CD89 (C-20) is recommended for detection of CD89 isoforms A.1, A.2 and A.3 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (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 CD89 siRNA (h): sc-42815, CD89 shRNA Plasmid (h): sc-42815-SH and CD89 shRNA (h) Lentiviral Particles: sc-42815-V.

Molecular Weight of CD89 protein core: 32 kDa.

Molecular Weight of CD89 glycoprotein: 50-75 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, HL-60 whole cell lysate: sc-2209 or THP-1 cell lysate: sc-2238.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

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

PROTOCOLS

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


 MONOS
 Satisfation
 Guaranteed

Try **CD89 (A3): sc-19680** or **CD89 (MIP8a): sc-59138**, our highly recommended monoclonal alternatives to CD89 (C-20).