

# CD89 (N-20): sc-17084

## 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  $\gamma$  chain. Molecular basis for CD89/FcR  $\gamma$  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  $\gamma$  RI (CD64) and Fc  $\alpha$  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.

## CHROMOSOMAL LOCATION

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

## SOURCE

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

## PRODUCT

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

Blocking peptide available for competition studies, sc-17084 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

CD89 (N-20) is recommended for detection of all CD89 isoforms of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], 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.

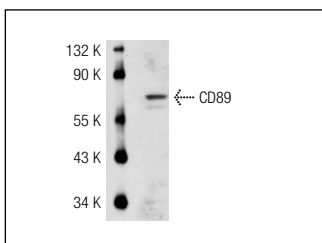
Molecular Weight of CD89 glycoprotein: 50-75 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203 or THP-1 cell lysate: sc-2238.

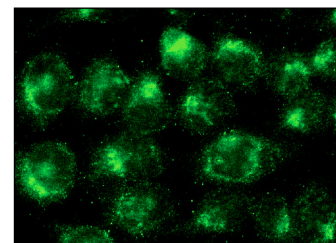
## RECOMMENDED SECONDARY REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

## DATA



CD89 (N-20): sc-17084. Western blot analysis of CD89 expression in Hep G2 whole cell lysate.



CD89 (N-20): sc-17084. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

## RESEARCH USE

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

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