SANTA CRUZ BIOTECHNOLOGY, INC.

CD89 (H-115): sc-20927

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, HC., 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, PD., 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 (LocusID: 2204). http://www.ncbi.nlm.nih.gov/LocusLink/

CHROMOSOMAL LOCATION

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

SOURCE

CD89 (H-115) is a rabbit polyclonal antibody raised against amino acids 1-115 mapping within an N-terminal extracellular domain of CD89 of human origin.

PRODUCT

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

APPLICATIONS

CD89 (H-115) is recommended for detection of CD89 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 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: CCRF-CEM cell lysate: sc-2225, K-562 whole cell lysate: sc-2203L 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 goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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 or our catalog for detailed protocols and support products.