SANTA CRUZ BIOTECHNOLOGY, INC.

CD89 (MIP7c): sc-101472

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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. CD89, also known as Immunoglobulin α Fc receptor (Fc α RI), is a glycoprotein that is expressed on the surface of neutrophils, monocytes, macrophages and eosinophils and is a potent cytotoxic trigger molecule. CD89 specifically interacts with aggregated IgAs, not IgG. Cytokines can initiate a high-binding state for CD89 through a mechanism that involves the intracellular C-terminus of CD89. Polymorphisms within the gene encoding CD89 may be associated with susceptibility to IgA nephropathy, a form of glomerulonephritis characterized by IgA antibody deposition in the kidney glomerulus.

REFERENCES

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2. de Wit, T.P., Morton, H.C., Capel, P.J. and van de Winkel, J.G. 1995. Structure of the gene for the human myeloid IgA Fc receptor (CD89). J. Immunol. 155: 1203-1209.
3. Tsuge, T., Shimokawa, T., Horikoshi, S., Tomino, Y. and Ra, C. 2001. Polymorphism in promoter region of Fcα receptor gene in patients with IgA nephropathy. Hum. Genet. 108: 128-133.
4. Herr, A.B., Ballister, E.R. and Bjorkman, P.J. 2003. Insights into IgA-mediated immune responses from the crystal structures of human FcαRI and its complex with IgA1-Fc. Nature 423: 614-620.
5. Online Mendelian Inheritance in Man, OMIM™. 2003. Johns Hopkins University, Baltimore, MD. MIM Number: 147045. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
6. Gomes, M.M., Wall, S.B., Takahashi, K., Novak, J., Renfrow, M.B. and Herr, A.B. 2008. Analysis of IgA1 N-glycosylation and its contribution to Fc α RI binding. Biochemistry 47: 11285-11299.

CHROMOSOMAL LOCATION

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

SOURCE

CD89 (MIP7c) is a mouse monoclonal antibody raised against soluble CD89 of human origin.

PRODUCT

Each vial contains 100 µg IgG_1 in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

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

APPLICATIONS

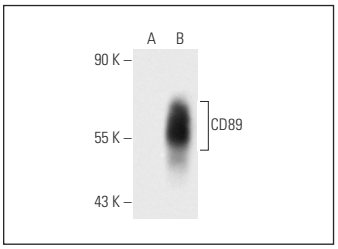
CD89 (MIP7c) is recommended for detection of the extracellular EC1 domain of CD89 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and flow cytometry (1 µg per 1 x 10^6 cells).

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.

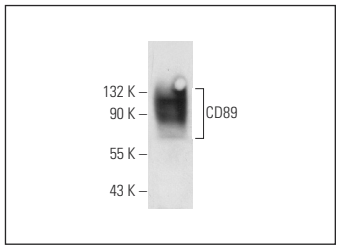
Molecular Weight of CD89: 50-100 kDa.

Positive Controls: CD89 (h): 293T Lysate: sc-114169, HL-60 whole cell lysate: sc-2209 or U-937 cell lysate: sc-2239.

DATA



CD89 (MIP7c): sc-101472. Western blot analysis of CD89 expression in non-transfected: sc-117752 (**A**) and human CD89 transfected: sc-114169 (**B**) 293T whole cell lysates.



CD89 (MIP7c): sc-101472. Western blot analysis of CD89 expression in HL-60 whole cell lysate.

STORAGE

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

PROTOCOLS

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