

FCAMR (E-13): sc-164385

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. The Fc α/μ receptor (FCAMR) functions as a receptor for the Fc fragment of IgA and IgM and mediates their endocytosis. FCAMR is a 532 amino acid protein that is expressed in mesangial cells and is upregulated by IFNG/IFN- γ . It is also expressed in secondary lymphoid organs, such as lymph node and appendix, kidney and intestine, suggesting an important role of the receptor for immunity in these organs.

REFERENCES

1. Shibuya, A., Sakamoto, N., Shimizu, Y., Shibuya, K., Osawa, M., Hiroshima, T., Eyre, H.J., Sutherland, G.R., Endo, Y., Fujita, T., Miyabayashi, T., Sakano, S., Tsuji, T., Nakayama, E., Phillips, J.H., Lanier, L.L. and Nakauchi, H. 2000. Fc α/μ receptor mediates endocytosis of IgM-coated microbes. *Nat. Immunol.* 1: 441-446.
2. Sakamoto, N., Shibuya, K., Shimizu, Y., Yotsumoto, K., Miyabayashi, T., Sakano, S., Tsuji, T., Nakayama, E., Nakauchi, H. and Shibuya, A. 2001. A novel Fc receptor for IgA and IgM is expressed on both hematopoietic and non-hematopoietic tissues. *Eur. J. Immunol.* 31: 1310-1316.
3. Shimizu, Y., Honda, S., Yotsumoto, K., Tahara-Hanaoka, S., Eyre, H.J., Sutherland, G.R., Endo, Y., Shibuya, K., Koyama, A., Nakauchi, H. and Shibuya, A. 2001. Fc α/μ receptor is a single gene-family member closely related to polymeric immunoglobulin receptor encoded on Chromosome 1. *Immunogenetics* 53: 709-711.
4. McDonald, K.J., Cameron, A.J., Allen, J.M. and Jardine, A.G. 2002. Expression of Fc α/μ receptor by human mesangial cells: a candidate receptor for immune complex deposition in IgA nephropathy. *Biochem. Biophys. Res. Commun.* 290: 438-442.
5. Hu, R.H., Zhang, Y. and Zhao, M.H. 2005. Transferrin receptor and Fc α/μ receptor may not be the major IgA1 receptor on human mesangial cells. *Chin. Med. J.* 118: 781-785.
6. Brown, E.E., Edberg, J.C. and Kimberly, R.P. 2007. Fc receptor genes and the systemic lupus erythematosus diathesis. *Autoimmunity* 40: 567-581.

CHROMOSOMAL LOCATION

Genetic locus: FCAMR (human) mapping to 1q32.1.

SOURCE

FCAMR (E-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an N-terminal extracellular domain of FCAMR 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-164385 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

FCAMR (E-13) is recommended for detection of FCAMR 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 FCAMR siRNA (h): sc-88285, FCAMR shRNA Plasmid (h): sc-88285-SH and FCAMR shRNA (h) Lentiviral Particles: sc-88285-V.

Molecular Weight of FCAMR: 58 kDa.

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.