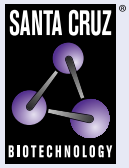
SANTA CRUZ BIOTECHNOLOGY, INC.

Fc γ RIIb (RR05): sc-73817



The Power to Question

BACKGROUND

CD32 (also designated Fc γ RII) is a low affinity receptor for the Fc fragment of aggregated IgG. CD32 is responsible for the clearance of immunocomplexes by macrophages and also plays an important role in the regulation of antibody production by B cells. IgG can noncooperatively bind either one or two highly glycosylated CD32 molecules, and this binding delivers a negative signal for B cells. CD32 exists as several isoforms that are produced by alternative splicing of three distinct genes, A, B, and C. These isoforms are designated FcgRIIA (Fc γ RIII), FcgRIIB1 (Fc γ RIIb), FcgRIIB3, and FcgRIIC. All isoforms are present on monocytes, placental trophoblasts and endothelial cells. In addition, the Fc γ RIIb forms are present on B lymphocytes, and the FcgRIIA and FcgRIIC forms are found on neutrophils.

REFERENCES

1. Bijsterbosch, M.K. and Klaus, G.G. 1985. Crosslinking of surface immunoglobulin and Fc receptors on B lymphocytes inhibits stimulation of inositol phospholipid breakdown via the antigen receptors. J. Exp. Med. 162: 1825-1836.
2. Huizinga, T.W.J., Kerst, M., Nuyens, J.H., Vlug, A., von dem Borne, A.E., Roos, D. and Tetteroo, P.A. 1989. Binding characteristics of dimeric IgG subclass complexes to human neutrophils. J. Immunol. 142: 2365-2369.
3. Stuart, S.G., Simister, N.E., Clarkson, S.B., Kacinski, B.M., Shapiro, M. and Mellman, I. 1989. Human IgG Fc receptor (hFcRII; CD32) exists as multiple isoforms in macrophages, lymphocytes and IgG-transporting placental epithelium. EMBO J. 8: 3657-3666.
4. Raveth, J.V. and Kinet, J-P. 1991. Fc Receptors. Annu. Rev. Immunol. 9: 457-492.
5. Barclay, A.N., Beyers, A.D., Birkeland, M.L., Brown, S.J., Somoza, C. and Williams, A.F. 1993. The Leukocyte Antigen Facts Book. London: Academic Press, 170-172.
6. Sondermann, P., Jacob, U., Kutscher, C. and Frey, J. 1999. Characterization and crystallization of soluble human Fc γ RII (CD32) isoforms produced in insect cells. Biochemistry 38: 8469-8477.

CHROMOSOMAL LOCATION

Genetic locus: FCGR2B (human) mapping to 1q23.3; Fcgr2b (mouse) mapping to 1 H3.

SOURCE

Fc γ RIIb (RR05) is a rat monoclonal antibody raised against amino acids 40-217 of Fc γ RIIb of mouse origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} in 1.0 ml PBS with < 0.1% sodium azide and protein stabilizer.

PROTOCOLS

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

APPLICATIONS

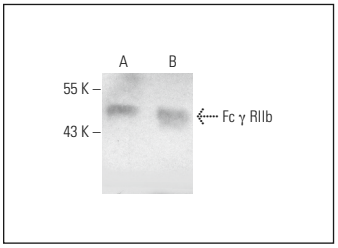
Fc γ RIIb (RR05) is recommended for detection of Fc γ RIIb of mouse, rat and human origin by Western Blotting (non-reducing) (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Fc γ RIIb siRNA (m): sc-42773, Fc γ RIIb shRNA Plasmid (m): sc-42773-SH and Fc γ RIIb shRNA (m) Lentiviral Particles: sc-42773-V.

Molecular Weight of Fc γ RIIb: 37 kDa.

Positive Controls: human placenta extract: sc-363772 or mouse placenta extract: sc-364247.

DATA



Fc γ RIIb (RR05): sc-73817. Western blot analysis of Fc γ RIIb expression in human placenta (**A**) and mouse placenta (**B**) tissue extracts.

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.