SANTA CRUZ BIOTECHNOLOGY, INC.

CD32-B/Fc γ RIIb (E-16): sc-13271

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., et al. 1989. Binding characteristics of dimeric IgG subclass complexes to human neutrophils. J. Immunol. 142: 2365-2369.
3. Stuart, S.G., et al. 1989. Human IgG Fc receptor (hFcRII; CD32) exists as multiple isoforms in macrophages, lymphocytes and IgG-transporting placental epithelium. EMBO J. 8: 3657-3666.

CHROMOSOMAL LOCATION

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

SOURCE

CD32-B/Fc γ RIIb (E-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Fc γ RIIb of mouse origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-13271 P, (100 µg 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.

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.

APPLICATIONS

CD32-B/Fc γ RIIb (E-16) is recommended for detection of Fc γ RIIb of mouse origin, the corresponding rat homolog and to a lesser extent CD32-B of human origin of mouse, rat and 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).

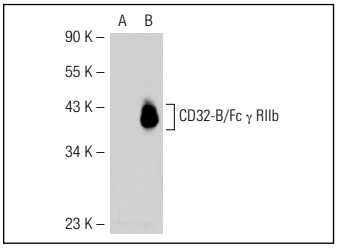
Molecular Weight of CD32-B/Fc γ RIIb: 37 kDa.

Positive Controls: CD32 (h3): 293T Lysate: sc-113838 or U-937 cell lysate: sc-2239.

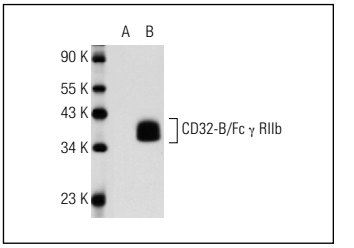
RECOMMENDED SECONDARY REAGENTS

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



CD32-B/Fc γ RIIb (E-16): sc-13271. Western blot analysis of CD32-B/Fc γ RIIb expression in non-transfected: sc-117752 (**A**) and human CD32-B transfected: sc-113838 (**B**) 293T whole cell lysates.



CD32-B/Fc γ RIIb (E-16): sc-13271. Western blot analysis of CD32-B/Fc γ RIIb expression in non-transfected: sc-117752 (**A**) and human CD32 transfected: sc-112840 (**B**) 293T whole cell lysates

SELECT PRODUCT CITATIONS

1. Ichiyama, T., et al. 2004. Intravenous immunoglobulin inhibits NFκB activation and affects Fcγ receptor expression in monocytes/macrophages. Naunyn Schmiedebergs Arch. Pharmacol. 369: 428-433.
2. Ichiyama, T., et al. 2005. Intravenous immunoglobulin does not increase FcγRIIB expression on monocytes/macrophages during acute Kawasaki disease.Rheumatology. 44: 314-317.
3. Xiang, Z., et al. 2007. FcγRIIb controls bone marrow plasma cell persistence and apoptosis. Nat. Immunol. 8: 419-429.
4. Li, C., et al. 2008. The X-linked lymphoproliferative syndrome gene product SAP regulates B cell function through the FcγRIIB receptor. Cell. Signal. 20: 1960-1967.