SANTA CRUZ BIOTECHNOLOGY, INC.

CD32-A/B/C (B-4): sc-166711

SANTA CRUZ BIOTECHNOLOGY

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 Fc γ RIIA, Fc γ RIIB1, Fc γ RIIB3 and Fc γ RIIC. 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 Fc γ RIIA and Fc γ RIIC forms are found on neutrophils.

CHROMOSOMAL LOCATION

Genetic locus: FCGR2A/FCGR2B/FCGR2C (human) mapping to 1q23.3; Fcgr2b/Fcgr3 (mouse) mapping to 1 H3.

SOURCE

CD32-A/B/C (B-4) is a mouse monoclonal antibody raised against amino acids 1-206 mapping at the N-terminus of CD32 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CD32-A/B/C (B-4) is available conjugated to agarose (sc-166711 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-166711 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166711 PE), fluorescein (sc-166711 FITC), Alexa Fluor® 488 (sc-166711 AF488), Alexa Fluor® 546 sc-166711 AF546), Alexa Fluor® 594 (sc-166711 AF594) or Alexa Fluor® 647 (sc-166711 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-166711 AF680) or Alexa Fluor® 790 (sc-166711 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

CD32-A/B/C (B-4) is recommended for detection of CD32-A, CD32-B and CD32-C of human origin and Fc γ RIIb and Fc γ RIII of mouse and rat origin by Western Blotting (starting dilution 1:100, 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), immunohistochemistry (including paraffin-embedded sections) (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 CD32-A/B/C siRNA (h): sc-42772, CD32-A/B/C shRNA Plasmid (h): sc-42772-SH and CD32-A/B/C shRNA (h) Lentiviral Particles: sc-42772-V.

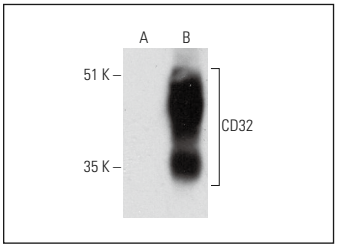
Molecular Weight of CD32-A/B/C: 40 kDa.

Positive Controls: CD32 (h3): 293T Lysate: sc-113838 or AML-193 whole cell lysate: sc-364182.

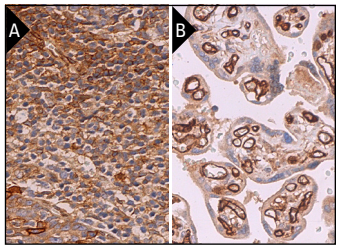
STORAGE

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

DATA



CD32-A/B/C (B-4) HRP: sc-166711 HRP. Direct western blot analysis of CD32 expression in non-transfected: sc-117752 (**A**) and human CD32 transfected: sc-113838 (**B**) 293T whole cell lysates.



CD32-A/B/C (B-4): sc-166711. Immunoperoxidase staining of formalin fixed, paraffin-embedded human tonsil tissue showing membrane and cytoplasmic staining of cells in germinal center and cells in non-germinal center and squamous epithelial cells (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing membrane and cytoplasmic staining of endothelial cells (**B**).

SELECT PRODUCT CITATIONS

1. Burgess, M., et al. 2017. Increased FcγRIIB dominance contributes to the emergence of resistance to therapeutic antibodies in chronic lymphocytic leukaemia patients. Oncogene 36: 2366-2376.
2. Wang, S.W., et al. 2019. Cinobufacini ameliorates dextran sulfate sodium-induced colitis in mice through inhibiting M1 macrophage polarization. J. Pharmacol. Exp. Ther. 368: 391-400.
3. Sheng, L., et al. 2020. Overexpression of FcγRIIB regulates downstream protein phosphorylation and suppresses B cell activation to ameliorate systemic lupus erythematosus. Int. J. Mol. Med. 46: 1409-1422.
4. Bolognesi, M.M., et al. 2021. Antibodies validated for routinely processed tissues stain frozen sections unpredictably. Biotechniques 70: 137-148.
5. Xia, Z., et al. 2021. Emodin alleviates hypertrophic scar formation by suppressing macrophage polarization and inhibiting the Notch and TGF-β pathways in macrophages. Braz. J. Med. Biol. Res. 54: e11184.
6. Moroki, T., et al. 2021. Databases for technical aspects of immunohisto-chemistry: 2021 update. J. Toxicol. Pathol. 34: 161-180.
7. Luo, X.Q., et al. 2021. Flagellin alleviates airway allergic response by stabilizing eosinophils through modulating oxidative stress. J. Innate Immun. 13: 333-344.
8. Hollis, W.C., et al. 2024. Submicron immunoglobulin particles exhibit FcγRII-dependent toxicity linked to autophagy in TNFα-stimulated endo-thelial cells. Cell. Mol. Life Sci. 81: 376.

RESEARCH USE

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