SANTA CRUZ BIOTECHNOLOGY, INC.

CD32-A/C (C-17): sc-12811

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 FcγRIIA, FcγRIIB1, FcγRIIB3, and FcγRIIC. All isoforms are present on monocytes, placental trophoblasts and endothelial cells. In addition, the FcγRIIB forms are present on B lymphocytes, and the FcγRIIA and FcγRIIC forms are found on neutrophils.

REFERENCES

1. Bijsterbosch, M.K., et al. 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.
4. Raveth, J.V., et al. 1991. Fc receptors. Annu. Rev. Immunol. 9: 457-492.
5. Barclay, A.N., et al. 1993. The Leukocyte Antigen Facts Book. London: Academic Press: 170-172.
6. Sondermann, P., et al. 1999. Characterization and crystallization of soluble human Fc γ receptor II (CD32) isoforms produced in insect cells. Biochemistry 38: 8469-8477.

CHROMOSOMAL LOCATION

Genetic locus: FCGR2A/FCGR2C (human) mapping to 1q23.3.

SOURCE

CD32-A/C (C-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of CD32-A of human 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-12811 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.

APPLICATIONS

CD32-A/C (C-17) is recommended for detection of CD32-A and CD32-C 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)], 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).

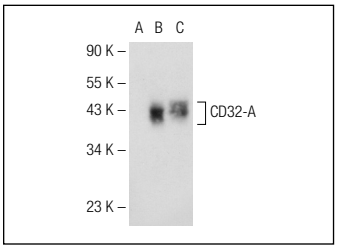
Molecular Weight of CD32-A/C: 40 kDa.

Positive Controls: U-937 cell lysate: sc-2239, CD32-A (h2): 293T Lysate: sc-174810 or AML-193 whole cell lysate: sc-364182.

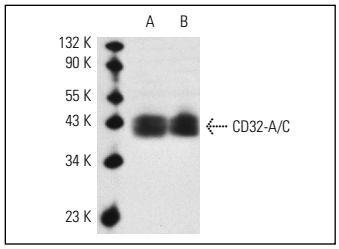
RECOMMENDED SECONDARY REAGENTS

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-A/C (C-17): sc-12811. Western blot analysis of CD32-A expression in non-transfected 293T: sc-117752 (**A**), human CD32-A transfected 293T: sc-174810 (**B**) and AML-193 (**C**) whole cell lysates.



CD32-A/C (C-17): sc-12811. Western blot analysis of CD32-A/C expression in U-937 (**A**) and AML 193 (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Leidi, M., et al. 2009. M2 macrophages phagocytose rituximabopsonized leukemic targets more efficiently than m1 cells *in vitro*. J. Immunol. 182: 4415-4422.

PROTOCOLS

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