SANTA CRUZ BIOTECHNOLOGY, INC.

C2 (050-04): sc-58922

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The complement component proteins, C2, C3, C4 and C5 are potent anaphylatoxins that are released during complement activation. Binding of these proteins to their respective G protein-coupled receptors induces proinflammatory events such as cellular degranulation, smooth muscle contraction, arachidonic acid metabolism, cytokine release, leukocyte activation and cellular chemotaxis. C2 deficiency (C2D) is the most common deficiency of the classical complement pathway and is mostly found in patients with autoimmune disease or susceptibility to bacterial infections. The N-terminal extracellular domain 1 of complement C2 receptor inhibitory trispanning, or CRIT, binds to C2 and specifically interacts with the C2α fragment. In doing so, CRIT blocks C2 cleavage and also prevents the classical pathway of C3 convertase formation.

REFERENCES

1. Manderson, A.P., et al. 2001. Continual low-level activation of the classical complement pathway. J. Exp. Med. 194: 747-756.
2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 217000. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
3. Inal, J.M., et al. 2004. Complement C2 receptor inhibitor trispanning: a novel human complement inhibitory receptor. J. Immunol. 174: 356-366.
4. Skelly, P.J. 2004. Intravascular schistosomes and complement. Trends Parasitol. 20: 370-374.
5. Kitano, E., et al. 2005. Immunologic tests: C2. Nippon Rinsho 63: 59-62.
6. Gold, B., et al. 2006. Variation in factor B (BF) and complement component 2 (C2) genes is associated with age-related macular degeneration. Nat. Genet. 38: 458-462.
7. Jönsson, G., et al. 2006. Homozygosity for the IgG_2 subclass allotype G2M(n) protects against severe infection in hereditary C2 deficiency. J. Immunol. 177: 722-728.

CHROMOSOMAL LOCATION

Genetic locus: C2 (human) mapping to 6p21.3; C2 (mouse) mapping to 17 B1.

SOURCE

C2 (050-04) is a mouse monoclonal antibody raised against full length native C2 of human origin.

PRODUCT

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

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

C2 (050-04) is recommended for detection of C2 and a subfraction of C2 believed to be C2b 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

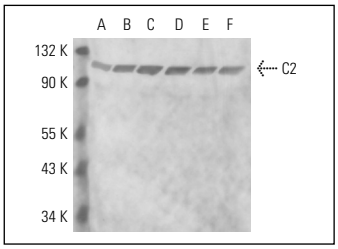
Molecular Weight of C2: 83 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Hep G2 cell lysate: sc-2227.Jurkat whole cell lysate: sc-2204 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 goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (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).

DATA



C2 (050-04): sc-58922. Western blot analysis of C2 expression in U-698-M (**A**), Hep G2 (**B**), THP-1 (**C**), U-937 (**D**), Jurkat (**E**) and HeLa (**F**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Hinterseher, I., et al. 2011. Role of complement cascade in abdominal aortic aneurysms. Arterioscler. Thromb. Vasc. Biol. 31: 1653-1660.

PROTOCOLS

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