

C2 (L-18): sc-101909

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 C2a fragment. In doing so, CRIT blocks C2 cleavage and also prevents the classical pathway of C3 convertase formation.

REFERENCES

- Manderson, A.P., et al. 2001. Continual low-level activation of the classical complement pathway. *J. Exp. Med.* 194: 747-756.
- 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/>
- Inal, J.M., et al. 2004. Complement C2 receptor inhibitor trispanning: a novel human complement inhibitory receptor. *J. Immunol.* 174: 356-366.
- Skelly, P.J. 2004. Intravascular schistosomes and complement. *Trends Parasitol.* 20: 370-374.
- Kitano, E., and Kitamura, H. 2005. [Immunologic tests: C2]. *Nippon Rinsho* 63: 59-62.
- 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.
- Jönsson, G., et al. 2006. Homozygosity for the IgG₂ subclass allotype G2M(n) protects against severe infection in hereditary C2 deficiency. *J. Immunol.* 177: 722-728.
- Selander, B., et al. 2006. Mannan-binding lectin activates C3 and the alternative complement pathway without involvement of C2. *J. Clin. Invest.* 116: 1425-1434.
- Song, W.C. 2006. Complement regulatory proteins and autoimmunity. *Autoimmunity* 39: 403-410.

CHROMOSOMAL LOCATION

Genetic locus: C2 (human) mapping to 6p21.32; C2 (mouse) mapping to 17 B1.

SOURCE

C2 (L-18) is a purified rabbit polyclonal antibody raised against C2 of human origin.

STORAGE

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

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

APPLICATIONS

C2 (L-18) is recommended for detection of C2 of mouse, rat, human, dog and zebrafish 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).

Suitable for use as control antibody for C2 siRNA (h): sc-95541, C2 siRNA (m): sc-141850, C2 shRNA Plasmid (h): sc-95541-SH, C2 shRNA Plasmid (m): sc-141850-SH, C2 shRNA (h) Lentiviral Particles: sc-95541-V and C2 shRNA (m) Lentiviral Particles: sc-141850-V.

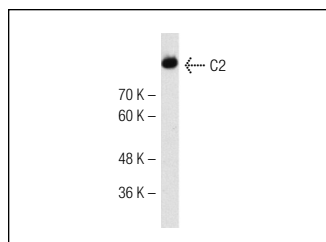
Molecular Weight of C2: 83 kDa.

Positive Controls: C5orf4 (G-16): sc-101910 or Hep G2 cell lysate: sc-2227.

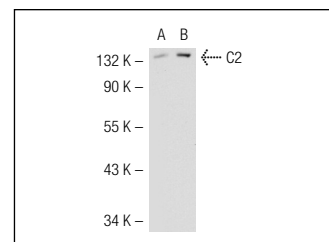
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 (L-18): sc-101909. Western blot analysis of C2 expression in Hep G2 whole cell lysate.



C2 (L-18): sc-101909. Western blot analysis of C2 expression in non-transfected: sc-117752 (A) and human C2 transfected: sc-114242 (B) 293T whole cell lysates.

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.