SANTA CRUZ BIOTECHNOLOGY, INC.

C2 (C-14): sc-167316

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

REFERENCES

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5. Kitano, E. and Kitamura, H. 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 $G_2M(n)$ protects against severe infection in hereditary C2 deficiency. J. Immunol. 177: 722-728.
8. 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.
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CHROMOSOMAL LOCATION

Genetic locus: C2 (human) mapping to 6p21.33.

SOURCE

C2 (C-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of 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 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-167316 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

C2 (C-14) is recommended for detection of C2 precursor and C2a fragment of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

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

Molecular Weight of C2: 85 kDa.

Molecular Weight of glycosylated C2: 102 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, U-937 cell lysate: sc-2239 or THP-1 cell lysate: sc-2238.

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) 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.

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.