

C3 (V-20): sc-14612

BACKGROUND

Complement C3 precursor contains complement C3 β chain, complement C3 α chain, C3a anaphylatoxin, complement C3b α chain, complement C3c fragment, complement C3dg fragment, complement C3g fragment, complement C3d fragment and complement C3f fragment. C3a, C4a, and C5a are potent anaphylatoxins that are released during complement activation, a system of ligand-surface protein interactions specific to cells of hematopoietic lineage that aids in the elimination of pathogens. C3a and C5a secretion correlates with pathophysiological phenotypes such as asthma and bacterial meningitis. Binding of these proteins to their respective G protein-coupled receptors (C3aR, C5aR), which are present on the surface of myeloid leukocytes, induces proinflammatory events such as cellular degranulation, smooth muscle contraction, arachidonic acid metabolism, cytokine release, leukocyte activation and cellular chemotaxis. C3aR is expressed in brain and activated B-lymphocytes whereas C5aR is prevalent on the surface of hepatocyte, lung, smooth muscle, and endothelial cells. Upon activation, C3aR and C5aR are susceptible to rapid GRK-mediated phosphorylation and clathrin-coated vesicle targeting. C5aR utilizes the Ras-Raf-ERK1/2 cascade and couples to G α /G16 proteins.

CHROMOSOMAL LOCATION

Genetic locus: C3 (human) mapping to 19p13.3; C3 (mouse) mapping to 17 D.

SOURCE

C3 (V-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of C3 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-14612 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

C3 (V-20) is recommended for detection of C3 precursor and C3 β chain of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

C3 (V-20) is also recommended for detection of C3 precursor and C3 β chain in additional species, including equine.

Suitable for use as control antibody for C3 siRNA (h): sc-37068, C3 siRNA (m): sc-37069, C3 shRNA Plasmid (h): sc-37068-SH, C3 shRNA Plasmid (m): sc-37069-SH, C3 shRNA (h) Lentiviral Particles: sc-37068-V and C3 shRNA (m) Lentiviral Particles: sc-37069-V.

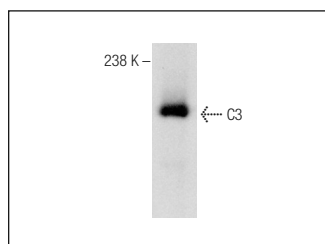
Molecular Weight of C3: 180 kDa.

Positive Controls: human liver extract: sc-363766 or Hep G2 cell lysate: sc-2227.

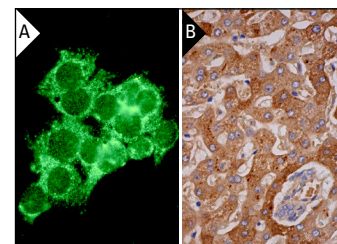
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use 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. 4) Immunohistochemistry: use ImmunoCruz[™]: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



C3 (V-20): sc-14612. Western blot analysis of C3 expression in human liver tissue extract.



C3 (V-20): sc-14612. Immunofluorescence staining of methanol-fixed Hep G2 cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human liver tissue showing cytoplasmic staining of squamous epithelial cells and glandular cells (B).

SELECT PRODUCT CITATIONS

- Lee, Y.L., et al. 2004. The embryotrophic activity of oviductal cell-derived complement C3b and iC3b, a novel function of complement protein in reproduction. *J. Biol. Chem.* 279: 12763-12768.
- Rostami, E., et al. 2013. The complement terminal pathway is activated in focal penetrating but not in mild diffuse traumatic brain injury. *J. Neurotrauma*. E-published.

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.

PROTOCOLS

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