

C3 (H-300): sc-20137

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_i/G₁₆ proteins.

CHROMOSOMAL LOCATION

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

SOURCE

C3 (H-300) is a rabbit polyclonal antibody raised against amino acids 541-840 mapping within an internal region 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.

STORAGE

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

APPLICATIONS

C3 (H-300) is recommended for detection of C3 precursor, C3a anaphylatoxin, C3 α chain, C3 β chain and C3b α' 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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.

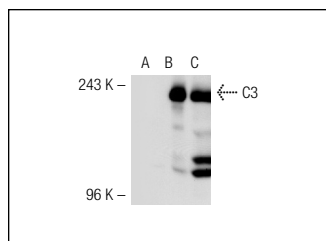
Molecular Weight of C3: 180 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227 and C3 (h): 293T Lysate: sc-112683.

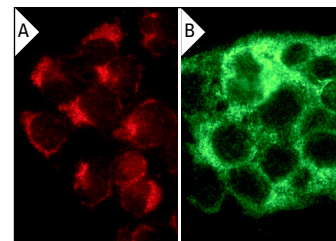
RECOMMENDED SECONDARY REAGENTS

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). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



C3 (H-300): sc-20137. Western blot analysis of C3 expression in non-transfected 293T: sc-117752 (A), human C3 transfected 293T: sc-112683 (B) and Hep G2 (C) whole cell lysates.



C3 (H-300): sc-20137. Immunofluorescence staining of methanol-fixed HeLa (A) and Hep G2 (B) cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Lackner, P., et al. 2008. Complement factors C1q, C3 and C5 in brain and serum of mice with cerebral malaria. *Malar. J.* 7: 207.
2. Maeda, A., et al. 2008. Retinopathy in mice induced by disrupted all-*trans*-retinal clearance. *J. Biol. Chem.* 283: 26684-26693.
3. Schmitt, J., et al. 2012. Complement factor C5 deficiency significantly delays the progression of biliary fibrosis in bile duct-ligated mice. *Biochem. Biophys. Res. Commun.* 418: 445-450.

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.

MONOS
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Try **C3 (B-9): sc-28294** or **C3 (C-4): sc-25298**, our highly recommended monoclonal alternatives to C3 (H-300). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **C3 (B-9): sc-28294**.