BACKGROUND

Complement component 4-binding protein (C4BP) is a plasma glycoprotein that inhibits the classical pathway of complement activation, which is mediated through antibody targeting of foreign antigen. Structurally, C4BP is a disulfide linked, multimeric protein that is composed of seven α chains and one β chain. C4BP functions as a cofactor for C3β inactivator in the cleavage of C3β, and accelerates the decay of C4β,C2α (C3 convertase) by acting as a cofactor in the cleavage of C4β by factor I. Streptococcal strains that express Ig-binding cell surface molecules, which are members of the M protein family, can bind to overlapping C4β binding sites in C4BP and therefore, interfere with the classical pathway of complement activation. Bacteria-bound C4BP may be an evolved mechanism that downregulates complement activation in the bacterial host microenvironment, thereby reducing the occurrences of bacterial opsonization and phagocytosis.

REFERENCES


CHROMOSOMAL LOCATION

Genetic locus: C4BPA (human) mapping to 1q32; C4bp (mouse) mapping to 1 E4.

SOURCE

C4BP (M-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of C4BP of mouse origin.

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-17214 P (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

C4BP (M-20) is recommended for detection of C4BP of mouse 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 C4BP siRNA (m): sc-42740; and as shRNA Plasmid control antibody for C4BP shRNA Plasmid (m): sc-42740-SH.

Molecular Weight of C4BP: 70 kDa.
Positive Controls: NIH/3T3 whole cell lysate: sc-2210.

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.

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.