



C1q-C (C-20): sc-27668

BACKGROUND

C1q, a subcomponent of the classical complement pathway, is composed of nine subunits that mediate classical complement activation and thereby play an important role in the immune response. Six of these subunits are disulfide-linked dimers of chains A and B, while three of these subunits, designated C1q-A through C1q-C, are disulfide-linked dimers of chain C. The presence of receptors for C1q on effector cells modulates its activity, which may be antibody-dependent or independent. Macrophages are the primary source of C1q, while anti-inflammatory drugs as well as cytokines differentially regulate expression of the mRNA, as well as the protein. However, its ability to modulate the interaction of platelets with collagen and immune complexes suggests C1q influences homeostasis as well as other immune activities, and perhaps thrombotic complications resulting from immune injury. Defects in C1q-A, C1q-B and C1q-C cause inactivation of the classical pathway, leading to a rare genetic disorder characterized by lupus-like symptoms.

REFERENCES

1. Gulati, P., et al. 1994. Expression of the components and regulatory proteins of the classical pathway of complement in normal and diseased synovium. *Rheumatol. Int.* 14: 13-19.
2. Petry, F., et al. 1996. The mouse C1q genes are clustered on chromosome 4 and show conservation of gene organization. *Immunogenetics* 43: 370-376.
3. Peerschke, E.I. and Ghebrehiwet, B. 1998. Platelet receptors for the complement component C1q: implications for haemostasis and thrombosis. *Immunobiology* 199: 239-249.
4. Kishore, U. and Reid, K.B. 2000. C1q: structure, function, and receptors. *Immunopharmacology* 49: 159-170.
5. Faust, D. and Loos, M. 2002. *In vitro* modulation of C1q mRNA expression and secretion by interleukin-1, interleukin-6, and interferon- γ in resident and stimulated murine peritoneal macrophages. *Immunobiology* 206: 368-376.
6. Faust, D., et al. 2002. Anti-inflammatory drugs modulate C1q secretion in human peritoneal macrophages *in vitro*. *Biochem. Pharmacol.* 64: 457-462.
7. Miura-Shimura, Y., et al. 2002. C1q regulatory region polymorphism down-regulating murine C1q protein levels with linkage to lupus nephritis. *J. Immunol.* 169: 1334-1339.
8. Chrast, R., et al. 2004. Complement factors in adult peripheral nerve: a potential role in energy metabolism. *Neurochem. Int.* 45: 353-359.

CHROMOSOMAL LOCATION

Genetic locus: C1QC (human) mapping to 1p36.11; C1qc (mouse) mapping to 4 D3.

SOURCE

C1q-C (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of C1q-C 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 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-27668 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

C1q-C (C-20) is recommended for detection of precursor and mature C1q-C 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 C1q-C siRNA (h): sc-72202.

Molecular Weight of C1q-C: 27 kDa.

Positive Controls: human macrophages or rat spleen extract: sc-2397.

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.