SANTA CRUZ BIOTECHNOLOGY, INC.

C1q-A (V-20): sc-27658

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The Power to Question

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. Peerschke, E.I. and Ghebrehiwet, B. 1998. Platelet receptors for the complement component C1q: implications for hemostasis and thrombosis. Immunobiology 199: 239-249.
2. Hiepe, F., Pfuller, B., Wolbart, K., Bruns, A., Leinenbach, H.P., Hepper, M., Schossler, W. and Otto, V. 1999. C1q: a multifunctional ligand for a new immunoadsorption treatment. Ther. Apher. 3: 246-251.
3. Kishore, U. and Reid, K.B. 2000. C1q: structure, function, and receptors. Immunopharmacology 49: 159-170.
4. 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.
5. Faust, D., Akoglu, B., Zgouras, D., Scheuermann, E.H., Milovic, V. and Stein, J. 2002. Anti-inflammatory drugs modulate C1q secretion in human peritoneal macrophages *in vitro*. Biochem. Pharmacol. 64: 457-462.
6. Petry, F. and Loos, M. 2005. Common silent mutations in all types of hereditary complement C1q deficiencies. Immunogenetics 57: 566-571.

CHROMOSOMAL LOCATION

Genetic locus: C1QA (human) mapping to 1p36.12.

SOURCE

C1q-A (V-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of C1q-A of human 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-27658 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

C1q-A (V-20) is recommended for detection of precursor and mature C1q-A 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).

C1q-A (V-20) is also recommended for detection of precursor and mature C1q-A in additional species, including canine.

Suitable for use as control antibody for C1q-A siRNA (h): sc-43651, C1q-A shRNA Plasmid (h): sc-43651-SH and C1q-A shRNA (h) Lentiviral Particles: sc-43651-V.

Molecular Weight of C1q-A: 29 kDa.

Positive Controls: ECV304 cell lysate: sc-2269, 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.

SELECT PRODUCT CITATIONS

1. Koide, T., Nishikawa, Y., Asada, S., Yamazaki, C.M., Takahara, Y., Homma, D.L., Otaka, A., Ohtani, K., Wakamiya, N., Nagata, K. and Kitagawa, K. 2006. Specific recognition of the collagen triple helix by chaperone HSP 47. II. The HSP 47-binding structural motif in collagens and related proteins. J. Biol. Chem. 281: 11177-11185.

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.