SANTA CRUZ BIOTECHNOLOGY, INC.

C1s (M-17): sc-46821



BACKGROUND

Activated C1s is in the form of a disulfide-linked heterodimer consisting of a heavy chain and a light chain. Defects in the gene encoding for C1s can cause selective C1s deficiency, a disorder characterized by early onset of various autoimmune diseases. The complement component proteins, C1, C3, C4 and C5, are potent anaphylatoxins that are released during complement activation. Binding of these proteins to their respective G protein-coupled receptors induces proinflammatory events, such as cellular degranulation, smooth muscle contraction, arachidonic acid metabolism, cytokine release, leukocyte activation and cellular chemotaxis. C1q, together with proenzymes C1r and C1s, yield C1, the first component of the classical pathway of the serum complement system. C1 consists of a calcium dependent trimolecular complex of C1r, C1s and C1g in a 2:2:1 ratio.

REFERENCES

- 1. Gaboriaud, C., Rossi, V., Bally, I., Arlaud, G.J. and Fontecilla-Camps, J.C. 2000. Crystal structure of the catalytic domain of human complement C1s: a serine protease with a handle. EMBO J. 19: 1755-1765.
- Dragon-Durey, M.A., Quartier, P., Fremeaux-Bacchi, V., Blouin, J., de Barace, C., Prieur, A.M., Weiss, L. and Fridman, W.H. 2001. Molecular basis of a selective C1s deficiency associated with early onset multiple autoimmune diseases. J. Immunol. 166: 7612-7616.
- Gregory, L.A., Thielens, N.M., Arlaud, G.J., Fontecilla-Camps, J.C. and Gaboriaud, C. 2003. X-ray structure of the Ca²⁺-binding interaction domain of C1s. Insights into the assembly of the C1 complex of complement. J. Biol. Chem. 278: 32157-32164.
- Glovsky, M.M., Ward, P.A. and Johnson, K.J. 2004. Complement determinations in human disease. Ann. Allergy Asthma Immunol. 93: 513-522.
- Liu, T., Qian, W.J., Gritsenko, M.A., Camp, D.G., 2nd, Monroe, M.E., Moore, R.J., Smith, R.D. 2005. Human plasma N-glycoproteome analysis by immunoaffinity subtraction, hydrazide chemistry, and mass spectrometry. J. Proteome Res. 4: 2070-2080.
- Wouters, D., Wiessenberg, H.D., Hart, M., Bruins, P., Voskuyl, A., Daha, M.R. and Hack, C.E. 2005. Complexes between C1q and C3 or C4: Novel and specific markers for classical complement pathway activation. J. Immunol. Methods 298: 35-45.

CHROMOSOMAL LOCATION

Genetic locus: C1S (human) mapping to 12p13; C1s (mouse) mapping to 6 F2.

SOURCE

C1s (M-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of C1s of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-46821 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

C1s (M-17) is recommended for detection of mature C1 esterase and C1s precursor of human and, to a lesser extent, mouse and rat 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 C1s siRNA (h): sc-60301, C1s siRNA (m): sc-60302, C1s shRNA Plasmid (h): sc-60301-SH, C1s shRNA Plasmid (m): sc-60302-SH, C1s shRNA (h) Lentiviral Particles: sc-60301-V and C1s shRNA (m) Lentiviral Particles: sc-60302-V.

Molecular Weight of C1s: 88 kDa.

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) Immunofluo-rescence: use 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.

MONOS Satisfation Guaranteed

Try **C1s (D-6): sc-365273**, our highly recommended monoclonal alternative to C1s (M-17).