

C1s (D-6): sc-365273

BACKGROUND

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 C1q in a 2:2:1 ratio. 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.

REFERENCES

1. Tosi, M., et al. 1987. Complete cDNA sequence of human complement C1s and close physical linkage of the homologous genes C1s and C1r. *Biochemistry* 26: 8516-8524.
2. Matsumoto, M., et al. 1989. Probing a C4/C4b-binding site on the γ -domain. *J. Immunol.* 142: 2743-2750.
3. Nakagawa, K., et al. 1999. Complement C1s activation in degenerating articular cartilage of rheumatoid arthritis patients: immunohistochemical studies with an active form specific antibody. *Ann. Rheum. Dis.* 58: 175-181.
4. Gaboriaud, C., et al. 2000. Crystal structure of the catalytic domain of human complement C1s: a serine protease with a handle. *EMBO J.* 19: 1755-1765.

CHROMOSOMAL LOCATION

Genetic locus: C1S (human) mapping to 12p13.31.

SOURCE

C1s (D-6) is a mouse monoclonal antibody raised against amino acids 140-208 mapping within an internal region of C1s of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

C1s (D-6) is available conjugated to agarose (sc-365273 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365273 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365273 PE), fluorescein (sc-365273 FITC), Alexa Fluor® 488 (sc-365273 AF488), Alexa Fluor® 546 (sc-365273 AF546), Alexa Fluor® 594 (sc-365273 AF594) or Alexa Fluor® 647 (sc-365273 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365273 AF680) or Alexa Fluor® 790 (sc-365273 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

In addition, C1s (D-6) is available conjugated to biotin (sc-365273 B), 200 μ g/ml, for WB, IHC(P) and ELISA.

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APPLICATIONS

C1s (D-6) is recommended for detection of mature C1 esterase and C1s precursor of human origin by Western Blotting (starting dilution 1:100, 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 C1s siRNA (h): sc-60301, C1s shRNA Plasmid (h): sc-60301-SH and C1s shRNA (h) Lentiviral Particles: sc-60301-V.

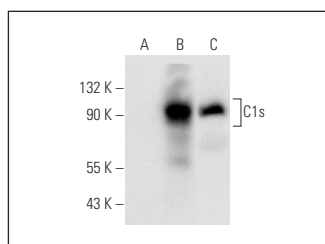
Molecular Weight of C1s: 88 kDa.

Positive Controls: C1s (h): 293T Lysate: sc-116635 or human platelet extract: sc-363773.

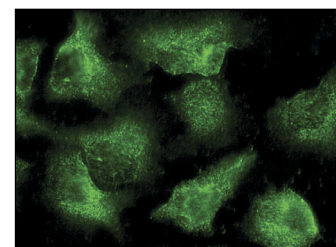
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



C1s (D-6): sc-365273. Western blot analysis of C1s expression in non-transfected: sc-117752 (A), human C1s transfected: sc-116635 (B) 293T whole cell lysates and human platelet extract (C).



C1s (D-6): sc-365273. Immunofluorescence staining of methanol-fixed HeLa cells showing cell surface localization.

SELECT PRODUCT CITATIONS

1. Zhang, L., et al. 2022. Complement regulation in ovine lymph nodes during early pregnancy. *Exp. Ther. Med.* 23: 166.

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.