SANTA CRUZ BIOTECHNOLOGY, INC.

C6 (D-8): sc-390735

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The complement cascade is a multi-protein system that functions to clear pathogens from an infected host. Part of the innate (unchanging) immune system, the complement cascade consists of proteins and inactive zymogens that are present in blood and are stimulated by one of several triggers. Once stimulated, the cascade relays amplified responses throughout the body, ultimately activating the cell-killing membrane attack complex which can insert itself into the cell membrane and cause the cell to lyse. C6 (complement component C6) is a 934 amino acid secreted protein that plays a role in the complement cascade, specifically functioning as part of the membrane attack complex. Expressed as two transcript variants, C6 contains one EGF-like domain, one LDL-receptor class A domain, one MACPF domain, two Sushi domains and three TSP type-1 domains. C6 deficiency is correlated with a higher risk of bacterial infection, further supporting the importance of C6 in the innate immune system.

REFERENCES

1. DiScipio, R.G. and Hugli, T.E. 1989. The molecular architecture of human complement component C6. J. Biol. Chem. 264: 16197-16206.
2. Haefliger, J.A., et al. 1989. Complete primary structure and functional characterization of the sixth component of the human complement system. Identification of the C5b-binding domain in complement C6. J. Biol. Chem. 264: 18041-18051.
3. Hobart, M.J., et al. 1993. Structure of the human C6 gene. Biochemistry 32: 6198-6205.
4. González, S. and López-Larrea, C. 1996. Characterization of the human C6 promoter: requirement of the CCAAT enhancer binding protein binding site for C6 gene promoter activity. J. Immunol. 157: 2282-2290.
5. Chamberlain-Banoub, J., et al. 2006. Complement membrane attack is required for endplate damage and clinical disease in passive experimental myasthenia gravis in Lewis rats. Clin. Exp. Immunol. 146: 278-286.

CHROMOSOMAL LOCATION

Genetic locus: C6 (human) mapping to 5p13.1.

SOURCE

C6 (D-8) is a mouse monoclonal antibody raised against amino acids 118-360 mapping near the N-terminus of C6 of human origin.

PRODUCT

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

C6 (D-8) is available conjugated to agarose (sc-390735 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390735 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390735 PE), fluorescein (sc-390735 FITC), Alexa Fluor® 488 (sc-390735 AF488), Alexa Fluor® 546 (sc-390735 AF546), Alexa Fluor® 594 (sc-390735 AF594) or Alexa Fluor® 647 (sc-390735 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390735 AF680) or Alexa Fluor® 790 (sc-390735 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

C6 (D-8) is recommended for detection of C6 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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 C6 siRNA (h): sc-72769, C6 shRNA Plasmid (h): sc-72769-SH and C6 shRNA (h) Lentiviral Particles: sc-72769-V.

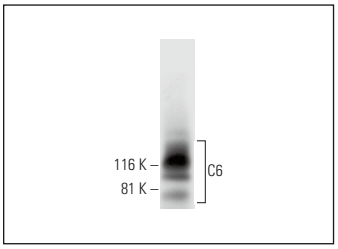
Molecular Weight of C6: 120 kDa.

Positive Controls: human plasma extract: sc-364374.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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



C6 (D-8): sc-390735. Western blot analysis of C6 in human plasma.

SELECT PRODUCT CITATIONS

1. Zhao, P., et al. 2019. The imbalance in the complement system and its possible physiological mechanisms in patients with lung cancer. BMC Cancer 19: 201.

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.