SANTA CRUZ BIOTECHNOLOGY, INC.

C8α (T-18): sc-323686

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. C8α (complement component 8, α polypeptide) is a 584 amino acid secreted protein that contains one EGF-like domain, one LDL-receptor class A domain, one MACPF domain and 2 TSP domains. Existing as a part of the membrane attack complex with C8β and C8γ, C8α binds to the C5-8 complex and acts to catalyze the polymerization of C9. Defects in the gene encoding C8α are associated with complement C8 deficiency type I (C8D1), a condition characterized by recurrent bacterial infections.

REFERENCES

1. Müller-Eberhard, H.J. 1988. Molecular organization and function of the complement system. Annu. Rev. Biochem. 57: 321-347.
2. Scheurer, B., et al. 1997. Expression of the human complement C8 subunits is independently regulated by interleukin 1 β, interleukin 6, and interferon γ. Immunopharmacology 38: 167-175.
3. Plumb, M.E., et al. 1999. Chimeric and truncated forms of human complement protein C8α reveal binding sites for C8β and C8γ within the membrane attack complex/perforin region. Biochemistry 38: 8478-8484.
4. Plumb, M.E. and Sodetz, J.M. 2000. An indel within the C8α subunit of human complement C8 mediates intracellular binding of C8γ and formation of C8α-γ. Biochemistry 39: 13078-13083.
5. Musingarimi, P., et al. 2002. Interaction between the C8 α-γ and C8β subunits of human complement C8: role of the C8β N-terminal thrombospondin type 1 module and membrane attack complex/perforin domain. Biochemistry 41: 11255-11260.
6. Parker, C.L. and Sodetz, J.M. 2002. Role of the human C8 subunits in complement-mediated bacterial killing: evidence that C8γ is not essential. Mol. Immunol. 39: 453-458.

CHROMOSOMAL LOCATION

Genetic locus: C8A (human) mapping to 1p32.2.

SOURCE

C8α (T-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of C8α 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-323686 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

C8α (T-18) is recommended for detection of C8α of human origin by Western Blotting (starting dilution 1:200, 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); non cross-reactive with C8β or C8γ.

C8α (T-18) is also recommended for detection of C8α in additional species, including equine, canine and porcine.

Suitable for use as control antibody for C8α siRNA (h): sc-88706, C8α shRNA Plasmid (h): sc-88706-SH and C8α shRNA (h) Lentiviral Particles: sc-88706-V.

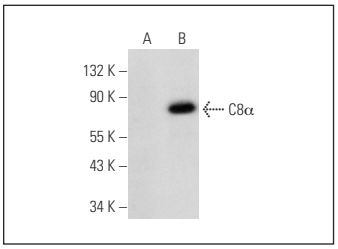
Molecular Weight of C8α: 65 kDa.

Positive Controls: C8α (h): 293T Lysate: sc-372979.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



C8α (T-18): sc-323686. Western blot analysis of C8α expression in non-transfected: sc-117752 (**A**) and human C8α transfected: sc-372979 (**B**) 293T whole cell lysates.

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.