

C8 β (G-14): sc-242261

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. C8 β (complement component 8, β polypeptide) is a 591 amino acid secreted protein that contains one EGF-like domain, one LDL-receptor class A domain, one MACPF domain and two TSP domains. Existing as a part of the membrane attack complex with C8 α and C8 γ , C8 β binds to the C5-7 complex and acts to catalyze the polymerization of C9. Defects in the gene encoding C8 β are associated with complement C8 deficiency type II, a condition characterized by recurrent bacterial infections.

REFERENCES

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- Plumb, M.E. and Sodetz, J.M. 2000. An indel within the C8 α subunit of human complement C8 mediates intracellular binding of C8 γ and formation of C8 α - γ . *Biochemistry* 39: 13078-13083.
- Musingarimi, P., Plumb, M.E. and Sodetz, J.M. 2002. Interaction between the C8 α - γ and C8 β subunits of human complement C8: role of the C8 β N-terminal Thrombospondin 1 module and membrane attack complex/perforin domain. *Biochemistry* 41: 11255-11260.
- Parker, C.L. and Sodetz, J.M. 2002. Role of the human C8 subunits in complement-mediated bacterial killing: evidence that C8 γ is not essential. *Mol. Immunol.* 39: 453-458.

CHROMOSOMAL LOCATION

Genetic locus: C8B (human) mapping to 1p32.2; C8b (mouse) mapping to 4 C6.

SOURCE

C8 β (G-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of C8 β of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-242261 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

C8 β (G-14) is recommended for detection of C8 β of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

C8 β (G-14) is also recommended for detection of C8 β in additional species, including equine and canine.

Suitable for use as control antibody for C8 β siRNA (h): sc-88726, C8 β siRNA (m): sc-141942, C8 β shRNA Plasmid (h): sc-88726-SH, C8 β shRNA Plasmid (m): sc-141942-SH, C8 β shRNA (h) Lentiviral Particles: sc-88726-V and C8 β shRNA (m) Lentiviral Particles: sc-141942-V.

Molecular Weight (predicted) of C8 β : 67 kDa.

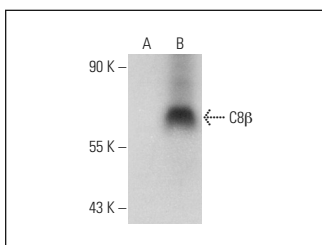
Molecular Weight (observed) of C8 β : 55 kDa.

Positive Controls: C8 β (m): 293T Lysate: sc-125084.

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



C8 β (G-14): sc-242261. Western blot analysis of C8 β expression in non-transfected: sc-117752 (A) and mouse C8 β transfected: sc-125084 (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.