

C8 β (U-21): sc-130999

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 2 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

- Müller-Eberhard, H.J. 1988. Molecular organization and function of the complement system. *Annu. Rev. Biochem.* 57: 321-347.
- Scheurer, B., Rittner, C. and Schneider, P.M. 1997. Expression of the human complement C8 subunits is independently regulated by interleukin 1 β , interleukin 6, and interferon γ . *Immunopharmacology* 38: 167-175.
- Plumb, M.E., Scibek, J.J., Barber, T.D., Dunlap, R.J., Platteborze, P.L. and Sodetz, J.M. 1999. Chimeric and truncated forms of human complement protein C8 α reveal binding sites for C8 β and C8 γ within the membrane attack complex/perforin region. *Biochemistry* 38: 8478-8484.
- 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 type 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.
- Online Mendelian Inheritance in Man, OMIM™. 2004. Johns Hopkins University, Baltimore, MD. MIM Number: 120960. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Liu, T., Qian, W.J., Gritsenko, M.A., Camp, D.G., Monroe, M.E., Moore, R.J. and Smith, R.D. 2005. Human plasma N-glycoproteome analysis by immunoaffinity subtraction, hydrazide chemistry, and mass spectrometry. *J. Proteome Res.* 4: 2070-2080.
- Slade, D.J., Chiswell, B. and Sodetz, J.M. 2006. Functional studies of the MACPF domain of human complement protein C8 α reveal sites for simultaneous binding of C8 β , C8 γ , and C9. *Biochemistry* 45: 5290-5296.

CHROMOSOMAL LOCATION

Genetic locus: C8B (human) mapping to 1p32.2.

SOURCE

C8 β (U-21) is an affinity purified rabbit polyclonal antibody raised against synthetic C8 β peptide of human origin.

PRODUCT

Each vial contains 50 μ g IgG in 500 μ l PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

APPLICATIONS

C8 β (U-21) is recommended for detection of C8 β of 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

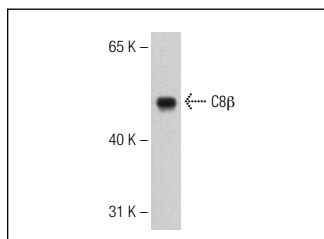
Suitable for use as control antibody for C8 β siRNA (h): sc-88726, C8 β shRNA Plasmid (h): sc-88726-SH and C8 β shRNA (h) Lentiviral Particles: sc-88726-V.

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

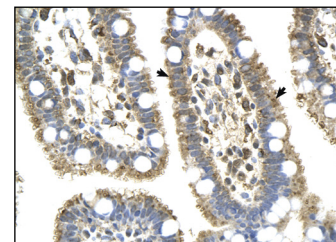
Molecular Weight (observed) of C8 β : 55 kDa.

Positive Controls: Human fetal liver tissue extract.

DATA



C8 β (U-21): sc-130999. Western blot analysis of C8 β expression in human fetal liver tissue extract.



C8 β (U-21): sc-130999. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human intestine tissue showing cytoplasmic localization.

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.