SANTA CRUZ BIOTECHNOLOGY, INC.

Factor B (H-95): sc-67141

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The complement component proteins, C3, C4 and C5, are potent anaphylatoxins that are released during complement activation. Binding of these proteins to their respective G protein-coupled receptors, C3αR, C1R and C5αR, induces proinflammatory events, such as cellular degranulation, smooth muscle contraction, arachidonic acid metabolism, cytokine release, leukocyte activation and cellular chemotaxis. Complement Factor B, also designated properdin Factor B or PBF2, is part of the alternate pathway of the complement system and is cleaved by Adipsin (also designated Factor D) into two fragments: Bα and Bβ. Bβ combines with complement Factor 3β to produce the C3 or C5 convertase and plays a role in the differentiation and proliferation of preactivated B lymphocytes, lysis of erythrocytes, stimulation of lymphocyte blastogenesis and rapid spreading of peripheral blood monocytes. Bα is important in inhibiting the proliferation of preactivated B lymphocytes. Adipsin is a serine protease that cleaves complement Factor B and may be involved in obesity. Factor H controls the function of the alternative complement pathway. FHR-1 (complement Factor H related protein 1) may play a role in lipid metabolism.

REFERENCES

1. Woods, D.E., et al. 1982. Isolation of cDNA clones for the human complement protein Factor B, a class III major histocompatibility complex gene product. Proc. Natl. Acad. Sci. USA 79: 5661-5665.
2. Campbell, R.D., et al. 1983. Molecular cloning and characterization of the gene coding for human complement protein Factor B. Proc. Natl. Acad. Sci. USA 80: 4464-4468.
3. Mole, J.E., et al. 1984. Complete primary structure for the zymogen of human complement Factor B. J. Biol. Chem. 259: 3407-3412.

CHROMOSOMAL LOCATION

Genetic locus: CFB (human) mapping to 6p21.33; Cfg (mouse) mapping to 17 B1.

SOURCE

Factor B (H-95) is a rabbit polyclonal antibody raised against amino acids 426-520 mapping within an internal region of Factor B 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.

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.

APPLICATIONS

Factor B (H-95) is recommended for detection of Complement Factor B Bβ Fragment of mouse, rat and 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), 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).

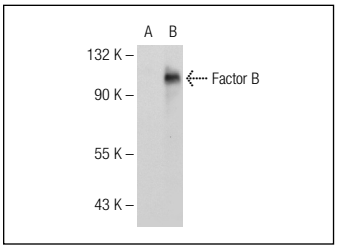
Factor B (H-95) is also recommended for detection of Complement Factor B Bβ Fragment in additional species, including equine, canine and porcine.

Suitable for use as control antibody for Factor B siRNA (h): sc-44510, Factor B siRNA (m): sc-44916, Factor B shRNA Plasmid (h): sc-44510-SH, Factor B shRNA Plasmid (m): sc-44916-SH, Factor B shRNA (h) Lentiviral Particles: sc-44510-V and Factor B shRNA (m) Lentiviral Particles: sc-44916-V.

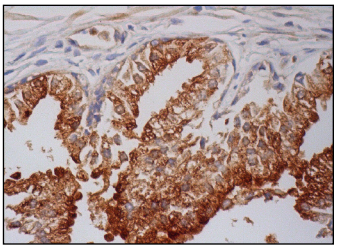
Molecular Weight of Factor B: 100 kDa.

Positive Controls: Factor B (h): 293 Lysate: sc-159858 or HeLa whole cell lysate: sc-2200.

DATA



Factor B (H-95): sc-67141. Western blot analysis of Factor B expression in non-transfected: sc-110760 (**A**) and human Factor B transfected: sc-159858 (**B**) 293 whole cell lysates.



Factor B (H-95): sc-67141. Immunoperoxidase staining of formalin fixed, paraffin-embedded human prostate tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Fan, W., et al. 2010. Early involvement of immune/inflammatory response genes in retinal degeneration in DBA/2J mice. Ophthalmol. Eye Dis. 1: 23-41.
2. Luo, C., et al. 2012. Expression of complement components and regulators by different subtypes of bone marrow-derived macrophages. Inflammation 35: 1448-1461.
3. Ma, W., et al. 2013. A2E accumulation influences retinal microglial activation and complement regulation. Neurobiol. Aging 34: 943-960.