SANTA CRUZ BIOTECHNOLOGY, INC.

Factor B (9B6): sc-57506

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 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, also designated complement Factor D, 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.
4. Wu, L.C., et al. 1987. Cell-specific expression of the human complement protein Factor B gene: evidence for the role of two distinct 5'-flanking elements. Cell 48: 331-342.
5. Kolb, W.P., et al. 1989. Bα and Bβ fragments of factor B activation: fragment production, biological activities, neoepitope expression and quantitation in clinical samples. Complement Inflamm. 6: 175-204.
6. Niemann, M.A., et al. 1991. The principal site of glycation of human complement Factor B. Biochem. J. 274: 473-480.
7. Jing, H., et al. 2000. New structural motifs on the Chymotrypsin fold and their potential roles in complement Factor B. EMBO J. 19: 164-173.

CHROMOSOMAL LOCATION

Genetic locus: CFB (human) mapping to 6p21.33.

SOURCE

Factor B (9B6) is a mouse monoclonal antibody raised against Factor B of human origin.

PRODUCT

Each vial contains 100 µg IgG_1 in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

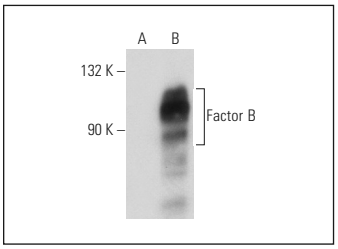
Factor B (9B6) is recommended for detection of Factor B of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

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

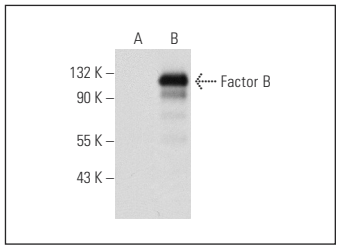
Molecular Weight of Factor B: 100 kDa.

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

DATA



Factor B (9B6): sc-57506. 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 (9B6): sc-57506. Western blot analysis of Factor B expression in non-transfected: sc-117752 (**A**) and human Factor B transfected: sc-170756 (**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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.