

C5 β (H-196): sc-20136

BACKGROUND

C3 α , C4 α and C5 α are potent anaphylatoxins that are released during complement activation, a system of ligand-surface protein interactions specific to cells of hematopoietic lineage that aids in the elimination of pathogens. Complement C5 precursor contains C5 α anaphylatoxin. C3 α and C5 α secretion correlates with pathophysiological phenotypes such as asthma and bacterial meningitis. Binding of these proteins to their respective G protein-coupled receptors (C3 α R, C5 α R), which are present on the surface of myeloid leukocytes, induces proinflammatory events such as cellular degranulation, smooth muscle contraction, arachidonic acid metabolism, cytokine release, leukocyte activation and cellular chemotaxis. C5 α R utilizes the Ras-Raf-ERK1/2 cascade, couples to G $_i$ /G16 proteins, and is prevalent on the surface of hepatocyte, lung, smooth muscle and endothelial cells. Upon activation, C3 α R and C5 α R are susceptible to rapid GRK-mediated phosphorylation and Clathrin-coated vesicle targeting. The C5 precursor is first processed by the removal of four basic residues, forming two chains, β and α , linked by a disulfide bond. C5 convertase activates C5 by cleaving the α chain, releasing C5 α anaphylatoxin and generating C5 β .

CHROMOSOMAL LOCATION

Genetic locus: C5 (human) mapping to 9q33.2; Hc (mouse) mapping to 2 B.

SOURCE

C5 β (H-196) is a rabbit polyclonal antibody raised against amino acids 21-216 mapping at the N-terminus of C5 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.

STORAGE

Store at 4 $^{\circ}$ C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

C5 β (H-196) is recommended for detection of C5 precursor and C5 β chain 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).

C5 β (H-196) is also recommended for detection of C5 precursor and C5 β chain in additional species, including canine.

Suitable for use as control antibody for C5 siRNA (h): sc-42848, C5 siRNA (m): sc-42849, C5 shRNA Plasmid (h): sc-42848-SH, C5 shRNA Plasmid (m): sc-42849-SH, C5 shRNA (h) Lentiviral Particles: sc-42848-V and C5 shRNA (m) Lentiviral Particles: sc-42849-V.

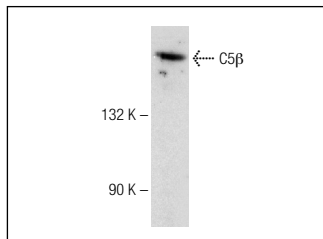
Molecular Weight of C5 β : 189 kDa.

Positive Controls: A549 cell lysate: sc-2413 or rat liver extract: sc-2395.

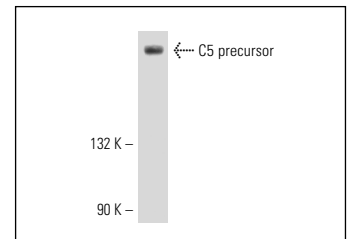
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz MarkerTM compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz MarkerTM 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruzTM Mounting Medium: sc-24941.

DATA



C5 β (H-196): sc-20136. Western blot analysis of C5 β expression in rat liver tissue extract.



C5 β (H-196): sc-20136. Western blot analysis of C5 precursor expression in A549 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Takemasa, H., et al. 2008. Coexistence of HERG current block and disruption of protein trafficking in ketoconazole-induced long QT syndrome. *Br. J. Pharmacol.* 153: 439-447.
2. Webhofer, C., et al. 2013. ¹⁵N metabolic labeling: evidence for a stable isotope effect on plasma protein levels and peptide chromatographic retention times. *J. Proteomics* 88: 27-33.

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.



Try **C5 β (E-8): sc-398247**, our highly recommended monoclonal alternative to C5 β (H-196).