SANTA CRUZ BIOTECHNOLOGY, INC.

C9 (E-3): sc-390000

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

C9 is a plasma protein synthesized in the liver and monocytes consisting of a single polypeptide chain. C9 is a part of the membrane attack complex (MAC), an important component of the immune system. The MAC forms upon complement system activation by invading pathogenic bacteria and consists of the four major complement proteins: C5b, C6, C7 and C8. These complement proteins bind to the outer surface of the plasma membrane of the invading cell. C9 binds to the membrane associated C5b-8 protein, which leads to the circular polymerization of 12-18 C9 molecules. These polymerized C9 molecules form a ring structure in the membrane. Molecules can then diffuse freely through this transmembrane channel, causing cell lysis and destruction of the invading bacterial cell.

CHROMOSOMAL LOCATION

Genetic locus: C9 (human) mapping to 5p13.1.

SOURCE

C9 (E-3) is a mouse monoclonal antibody raised against amino acids 350-559 mapping at the C-terminus of C9 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

C9 (E-3) is available conjugated to agarose (sc-390000 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390000 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390000 PE), fluorescein (sc-390000 FITC), Alexa Fluor® 488 (sc-390000 AF488), Alexa Fluor® 546 (sc-390000 AF546), Alexa Fluor® 594 (sc-390000 AF594) or Alexa Fluor® 647 (sc-390000 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390000 AF680) or Alexa Fluor® 790 (sc-390000 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

C9 (E-3) is recommended for detection of C9 of human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for C9 siRNA (h): sc-62032, C9 shRNA Plasmid (h): sc-62032-SH and C9 shRNA (h) Lentiviral Particles: sc-62032-V.

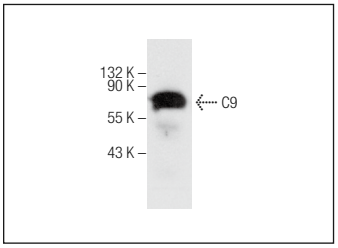
Molecular Weight of C9: 71 kDa.

Positive Controls: human liver extract: sc-363766 or human plasma extract: sc-364374.

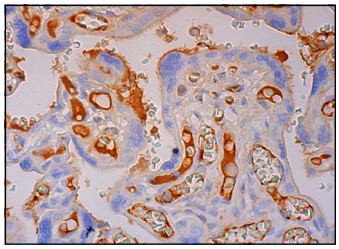
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



C9 (E-3): sc-390000. Western blot analysis of C9 expression in human liver tissue extract.



C9 (E-3): sc-390000. Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing extracellular staining of plasma.

SELECT PRODUCT CITATIONS

1. Romero, V., et al. 2013. Immune-mediated pore-forming pathways induce cellular hypercitrullination and generate citrullinated autoantigens in rheumatoid arthritis. Sci. Transl. Med. 5: 209ra150.
2. Chen, C., et al. 2016. Low activity of complement in the cerebrospinal fluid of the patients with various prion diseases. Infect. Dis. Poverty 5: 35.
3. Feng, P., et al. 2021. Early pregnancy regulates expression of complement components in ovine liver. Anim. Sci. J. 92: e13660.
4. Zhang, L., et al. 2022. Complement regulation in ovine lymph nodes during early pregnancy. Exp. Ther. Med. 23: 166.
5. Komaki, K., et al. 2022. Lemur tail kinase 1 (LMTK1) regulates the endosomal localization of β-secretase BACE1. J. Biochem. 170: 729-738.
6. Zhang, L., et al. 2022. Effects of early pregnancy on the complement system in the ovine thymus. Vet. Res. Commun. 46: 137-145.
7. Han, X., et al. 2022. Selection of early pregnancy specific proteins and development a rapid immunochromatographic test strip in cows. Theriogenology 187: 127-134.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.