SANTA CRUZ BIOTECHNOLOGY, INC.

CD46 (N-19): sc-7056

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

CD46, also called membrane cofactor protein (MCP), is a transmembrane glycoprotein that exists as a non-disulfide-linked dimer. CD46 regulates the complement cascade by inhibiting C3b and C4b deposited on self tissue. CD46 is a cofactor that binds to C3b and C4b, allowing their degradation by a plasma serine protease called factor I. This function resides in the complement control protein repeats (CCPs), with CCPs 2-4 essential for regulation. CD46 is widely distributed on thymocytes, T cells, B cells, monocytes, granulocytes, NK cells, platelets, endothelial cells, epithelial cells, fibroblasts, placenta and sperm, but not on erythrocytes. CD46 is the major high affinity receptor for measles virus and human herpes virus. Mouse cells ubiquitously express CRRY, which is a functional orthologue of human decay-accelerating factor (DAF; CD55) and membrane cofactor protein (MCP; CD46).

REFERENCES

1. Iwata, K., et al. 1995. Diversity of sites for measles virus binding and for inactivation of complement C3b and C4b on membrane cofactor protein CD46. J. Biol. Chem. 270: 15148-15152.
2. Liszewski, M.K., et al. 1996. Control of the complement system. Adv. Immunol. 61: 201-283.

CHROMOSOMAL LOCATION

Genetic locus: CD46 (human) mapping to 1q32.2.

SOURCE

CD46 (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of CD46 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.

Blocking peptide available for competition studies, sc-7056 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as fluorescein conjugate for immunofluorescence, sc-7056 FITC, 200 µg/1 ml.

APPLICATIONS

CD46 (N-19) is recommended for detection of CD46 of 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for CD46 siRNA (h): sc-35004, CD46 shRNA Plasmid (h): sc-35004-SH and CD46 shRNA (h) Lentiviral Particles: sc-35004-V.

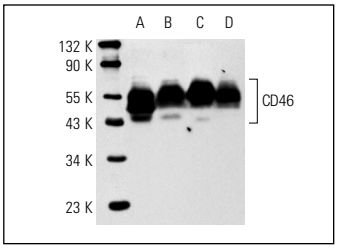
Molecular Weight of CD46: 56-66 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, K-562 whole cell lysate: sc-2203 or CD46 (h): 293T Lysate: sc-175035.

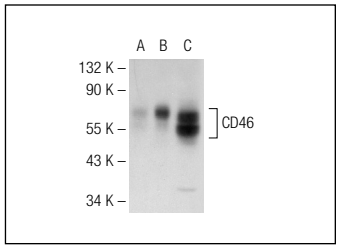
STORAGE

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

DATA



CD46 (N-19): sc-7056. Western blot analysis of CD46 expression in HeLa (**A**), K-562 (**B**), MOLT-4 (**C**) and BJAB (**D**) whole cell lysates.



CD46 (N-19): sc-7056. Western blot analysis of CD46 expression in non-transfected 293T: sc-117752 (**A**), human CD46 transfected 293T: sc-175035 (**B**) and HeLa (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Kirchner, M., et al. 2005. CD46-independent binding of neisserial type IV pili and the major pilus adhesin, PilC, to human epithelial cells. Infect. Immun. 73: 3072-3082.
2. Edwards, J.L., et al. 2005. I-domain-containing integrins serve as pilus receptors for *Neisseria gonorrhoeae* adherence to human epithelial cells. Cell. Microbiol. 7: 1197-1211.
3. Vanoosten, R.L., et al. 2005. Depsipeptide (FR901228) enhances the cytotoxic activity of TRAIL by redistributing TRAIL receptor to membrane lipid rafts. Mol. Ther. 11: 542-552.
4. Zhang, C., et al. 2005. Effect of IL-4 on altered expression of complement activation regulators in rat pancreatic cells during severe acute pancreatitis. World J. Gastroenterol. 11: 6770-6774.

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.