

# CD46 (E4.3): sc-7634

## 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 CCP1-4 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. It is the major high affinity receptor for measles virus and human herpes virus. Mouse cells ubiquitously express CRRY, which is a functional ortholog of human decay-accelerating factor (DAF; CD55) and membrane cofactor protein (MCP; CD46).

## CHROMOSOMAL LOCATION

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

## SOURCE

CD46 (E4.3) is a mouse monoclonal antibody raised against human PBL and EBV transformed LCL.

## PRODUCT

Each vial contains 200 µg IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CD46 (E4.3) is available conjugated to agarose (sc-7634 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-7634 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-7634 PE), fluorescein (sc-7634 FITC), Alexa Fluor® 488 (sc-7634 AF488), Alexa Fluor® 546 (sc-7634 AF546), Alexa Fluor® 594 (sc-7634 AF594) or Alexa Fluor® 647 (sc-7634 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-7634 AF680) or Alexa Fluor® 790 (sc-7634 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

CD46 (E4.3) 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 flow cytometry (1 µg per 1 x 10<sup>6</sup> cells).

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 MOLT-4 cell lysate: sc-2233.

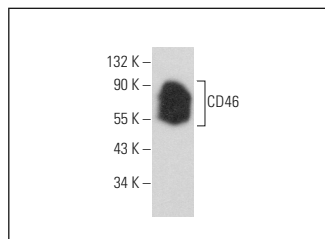
## RESEARCH USE

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

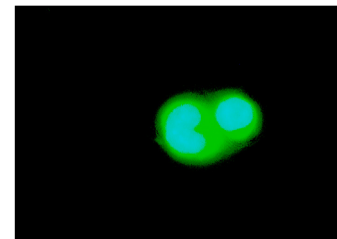
## STORAGE

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

## DATA



CD46 (E4.3): sc-7634. Western blot analysis of CD46 expression in HeLa whole cell lysate.



CD46 (E4.3): sc-7634. Immunofluorescence staining of methanol-fixed Ramos cells showing membrane localization of CD46 and DAPI nuclear counterstain.

## SELECT PRODUCT CITATIONS

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- Santoro, F., et al. 2003. Interaction of glycoprotein H of human herpesvirus 6 with the cellular receptor CD46. *J. Biol. Chem.* 278: 25964-25969.
- Edwards, J.L., et al. 2003. Gonococcal phospholipase d modulates the expression and function of complement receptor 3 in primary cervical epithelial cells. *Infect. Immun.* 71: 6381-6391.
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- Kitagawa, Y., et al. 2005. Ligand-directed gene targeting to mammalian cells by pseudotype baculoviruses. *J. Virol.* 79: 3639-3652.
- Wang, H., et al. 2008. *In vitro* and *in vivo* properties of adenovirus vectors with increased affinity to CD46. *J. Virol.* 82: 10567-10579.
- Chiarini, M., et al. 2020. Simultaneous quantification of natural and inducible regulatory T-cell subsets during interferon-β therapy of multiple sclerosis patients. *J. Transl. Med.* 18: 169.
- Feng, Y., et al. 2020. Human desmoglein-2 and human CD46 mediate HAdV55 infection but human desmoglein-2 plays the major roles. *J. Virol.* 94: e00747-20.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.