

TECHNICAL DATA SHEET

CyFlow™ CD46 Biotin Anti-Hu; Clone MEM-258

REF BY917651

For Research Use Only.

Not for use in diagnostic or therapeutic procedures.

Specifications

Antigen	CD46
Alternative Names	MCP
Clone	MEM-258
Clonality	monoclonal
Format	Biotin
Host / Isotype	Mouse / IgG1
Species Reactivity	Human, Cow
Negative Species Reactivity	—
Quantity [Concentration]	0.1 mg [1 mg/ml]
Immunogen	HPB-ALL human T cell line

Specificity

The mouse monoclonal antibody MEM-258 recognizes an epitope on SCR4 (the membrane-proximal SCR) domain of CD46 antigen, a 56-66 kDa dimeric transmembrane protein expressed on T and B

Contact Information:

Sysmex Partec GmbH • Am Flugplatz 13 • 02828 Görlitz • Germany
Tel +49 3581 8746 0 • Fax +49 3581 8746 70 • E-mail: info@sysmex-partec.com

lymphocytes, platelets, monocytes, granulocytes, endothelial cells, epithelial cells and fibroblast; it is negative on erythrocytes.

Application

The reagent is designed for indirect immunofluorescence analysis by Flow Cytometry. Suggested working usage is 1 µg/ml. Indicated dilution is recommended starting point for use of this product, but working concentrations should be validated by the investigator.

Other usages may be determined from the scientific literature.

Storage Buffer

The reagent is provided in phosphate buffered saline (PBS) solution, pH ≈7.4, containing 0.1% (w/v) sodium azide.

Storage and Stability

Storage	Avoid prolonged exposure to light. Store in the dark at 2-8°C. Do not freeze.
Stability	Do not use after expiration date stamped on vial label.

Background Information

CD46 (MCP; membrane cofactor protein) is a multifunctional cell surface transmembrane protein that binds and inactivates C3b and C4b complement fragments, regulates T cell-induced inflammatory responses by either inhibiting (CD46-1 isoform) or increasing (CD46-2 isoform) the contact hypersensitivity reaction. CD46 also serves as a receptor for several human pathogens (both bacteria and viruses), and its ligation alters T lymphocyte polarization toward antigen-presenting cells or target cells, inhibiting lymphocyte function. CD46 is a protector of placental tissue and is also expressed on the inner acrosomal membrane of spermatozoa.

References

- Okada N, Liszewski MK, Atkinson JP, Caparon M: Membrane cofactor protein (CD46 is a keratinocyte receptor for the M protein of the group A streptococcus. Proc Natl Acad Sci USA. 1995 Mar 28; 92(7):2489-93. < PMID: 7708671 >
- Marie JC, Astier AL, Rivallier P, Rabourdin-Combe C, Wild TF, Horvat B: Linking innate and acquired immunity: divergent role of CD46 cytoplasmic domains in T cell induced inflammation. Nat Immunol. 2002 Jul; 3(7):659-66. < PMID: 12055630 >

Contact Information:

Sysmex Partec GmbH • Am Flugplatz 13 • 02828 Görlitz • Germany
Tel +49 3581 8746 0 • Fax +49 3581 8746 70 • E-mail: info@sysmex-partec.com

- Gaggar A, Shayakhmetov DM, Lieber A: CD46 is a cellular receptor for group B adenoviruses. *Nat Med.* 2003 Nov; 9(11):1408-12. < PMID: 14566335 >
- Fleischli C, Verhaagh S, Havenga M, Sirena D, Schaffner W, Cattaneo R, Greber UF, Hemmi S: The distal short consensus repeats 1 and 2 of the membrane cofactor protein CD46 and their distance from the cell membrane determine productive entry of species B adenovirus serotype 35. *J Virol.* 2005 Aug; 79(15):10013-22. < PMID: 16014961 >
- Liszewski MK, Kemper C, Price JD, Atkinson JP: Emerging roles and new functions of CD46. *Springer Semin Immunopathol.* 2005 Nov; 27(3):345-58. < PMID: 16200405 >
- Oliaro J, Pasam A, Waterhouse NJ, Browne KA, Ludford-Menting MJ, Trapani JA, Russell SM: Ligation of the cell surface receptor, CD46, alters T cell polarity and response to antigen presentation. *Proc Natl Acad Sci USA.* 2006 Dec 5; 103(49):18685-90. < PMID: 17116876 >
- Weyand NJ, Lee SW, Higashi DL, Cawley D, Yoshihara P, So M: Monoclonal antibody detection of CD46 clustering beneath *Neisseria gonorrhoeae* microcolonies. *Infect Immun.* 2006 Apr; 74(4):2428-35. < PMID: 16552073 >
- Fremeaux-Bacchi V, Moulton EA, Kavanagh D, Dragon-Durey MA, Blouin J, Caudy A, Arzouk N, Cleper R, Francois M, Guest G, Pourrat J, Seligman R, Fridman WH, Loirat C, Atkinson JP: Genetic and functional analyses of membrane cofactor protein (CD46) mutations in atypical hemolytic uremic syndrome. *J Am Soc Nephrol.* 2006 Jul; 17(7):2017-25. < PMID: 16762990 >
- Loré K, Adams WC, Havenga MJ, Precopio ML, Holterman L, Goudsmit J, Koup RA: Myeloid and plasmacytoid dendritic cells are susceptible to recombinant adenovirus vectors and stimulate polyfunctional memory T cell responses. *J Immunol.* 2007 Aug 1; 179(3):1721-9. < PMID: 17641038 >
- Fleischli C, Sirena D, Lesage G, Havenga MJ, Cattaneo R, Greber UF, Hemmi S: Species B adenovirus serotypes 3, 7, 11 and 35 share similar binding sites on the membrane cofactor protein CD46 receptor. *J Gen Virol.* 2007 Nov; 88(11):2925-34. < PMID: 17947513 >
- Hoffmann D, Bayer W, Heim A, Potthoff A, Nettelbeck DM, Wildner O: Evaluation of twenty-one human adenovirus types and one infectivity-enhanced adenovirus for the treatment of malignant melanoma. *J Invest Dermatol.* 2008 Apr; 128(4):988-98. < PMID: 17960177 >
- Rebetz J, Na M, Su C, Holmqvist B, Edqvist A, Nyberg C, Widegren B, Salford LG, Sjögren HO, Arnberg N, Qian Q, Fan X: Fiber mediated receptor masking in non-infected bystander cells restricts adenovirus cell killing effect but promotes adenovirus host co-existence. *PLoS One.* 2009 Dec 29; 4(12):e8484. < PMID: 20041185 >

Contact Information:

Sysmex Partec GmbH • Am Flugplatz 13 • 02828 Görlitz • Germany
Tel +49 3581 8746 0 • Fax +49 3581 8746 70 • E-mail: info@sysmex-partec.com

- Wang H, Tuve S, Erdman DD, Lieber A: Receptor usage of a newly emergent adenovirus type 14. Virology. 2009 May 10; 387(2):436-41. < PMID: 19307010 >
- Kälén S, Amstutz B, Gastaldelli M, Wolfrum N, Boucke K, Havenga M, DiGennaro F, Liska N, Hemmi S, Greber UF: Macropinocytotic uptake and infection of human epithelial cells with species B2 adenovirus type 35. J Virol. 2010 May; 84(10):5336-50. < PMID: 20237079 >

The Safety Data Sheet for this product is available at www.sysmex-partec.com/services.

Contact Information:

Sysmex Partec GmbH • Am Flugplatz 13 • 02828 Görlitz • Germany
Tel +49 3581 8746 0 • Fax +49 3581 8746 70 • E-mail: info@sysmex-partec.com