

TECHNICAL DATA SHEET

CyFlow™ CD46 Azide Free Anti-Hu; Clone MEM-258

REF BZ758453

For Research Use Only.

Not for use in diagnostic or therapeutic procedures.

Specifications

Antigen	CD46
Alternative Names	MCP
Clone	MEM-258
Clonality	monoclonal
Format	Azide Free
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

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

Application

Based on published sources, this antibody is suitable for the following applications:

- Flow cytometry
- Immunoprecipitation
- Western blot

Storage Buffer

The reagent is provided in azide-free phosphate buffered saline (PBS) solution, pH ≈7.4; 0.2 µm filter sterilized.

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 >

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- 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 >

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- 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.

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