

TECHNICAL DATA SHEET

CyFlow™ CD59 Purified Anti-Hu; Clone MEM-43

REF AS570823

**For Research Use Only.
Not for use in diagnostic or therapeutic procedures.**

Specifications

Antigen	CD59
Alternative Names	Protectin H19
Clone	MEM-43
Clonality	monoclonal
Format	Purified
Host / Isotype	Mouse / IgG2a
Species Reactivity	Human
Negative Species Reactivity	—
Quantity [Concentration]	0.1 mg [1 mg/ml]
Immunogen	Thymocytes and T lymphocytes

Specificity

The mouse monoclonal antibody MEM-43 recognizes well defined epitope (W40, R-53) on CD59 antigen, an 18-20 kDa glycosylphosphatidylinositol (GPI)-anchored glycoprotein expressed on all hematopoietic cells; it is widely present on cells in all tissues.

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

Application

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

- Flow cytometry
- Immunoprecipitation
- Immunohistochemistry (paraffin-embedded sections)

Storage Buffer

The reagent is provided in phosphate buffered saline (PBS) solution, pH \approx 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

CD59 (Protectin) is a small (18-20 kDa) GPI-anchored ubiquitously expressed inhibitor of the membrane attack complex (MAC). It is thus the key regulator that preserves the autologous cells from terminal effector mechanism of the complement cascade. CD59 associates with C5b-8 complex and thereby counteracts appropriate formation of cytolytic pore within the plasma membrane. CD59 is also a low-affinity ligand of human CD2 and causes T cell costimulation.

References

- Horejsi V, Hilgert I, Kristofova H, Bazil V, Bukovsky A, Kulhankova J: Monoclonal antibodies against human leucocyte antigens (I); Antibodies against beta-2-microglobulin, immunoglobulin kappa light chains, HLA-DR-like antigens, T8 antigen, T1 antigen, a monocyte antigen, and a pan-leucocyte antigen. Folia Biol (Praha). 1986; 32(1):12-25. < PMID: 2422063 >
- Forsberg UH, Bazil V, Stefanova I, Schroder J: Gene for human CD59 (likely Ly-6 homologue) is located on the short arm of chromosome 11. Immunogenetics. 1989; 30(3):188-93. < PMID: 2476389 >
- Knapp W, Dorken B, Gilks W, Rieber EP, Schmidt RE, Stein H, von dem Borne AEGK (Eds): Leucocyte Typing IV. Oxford University Press, Oxford. 1989; 1-1820. < NLM ID: 8914679 >

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

- Stefanova I, Hilgert I, Kristofova H, Brown R, Low MG, Horejsi V: Characterization of a broadly expressed human leucocyte surface antigen MEM-43 anchored in membrane through phosphatidylinositol. *Mol Immunol.* 1989 Feb; 26(2):153-61. < PMID: 2918859 >
- Stefanova I, Horejsi V, Ansotegui IJ, Knapp W, Stockinger H: GPI-anchored cell-surface molecules complexed to protein tyrosine kinases. *Science.* 1991 Nov 15; 254(5034):1016-9. < PMID: 1719635 >
- Cinek T, Horejsi V: The nature of large noncovalent complexes containing glycosyl-phosphatidylinositol-anchored membrane glycoproteins and protein tyrosine kinases.. *J Immunol.* 1992 Oct 1; 149(7):2262-70. < PMID: 1382093 >
- Doussis IA, Gatter KC, Mason DY: CD68 reactivity of non-macrophage derived tumours in cytological specimens. *J Clin Pathol.* 1993 Apr; 46(4):334-6. < PMID: 7684403 >
- Bodian DL, Davis SJ, Morgan BP, Rushmere NK: Mutational analysis of the active site and antibody epitopes of the complement-inhibitory glycoprotein, CD59. *J Exp Med.* 1997 Feb 3; 185(3):507-16. < PMID: 9053451 >
- Cebecauer M, Cerny J, Horejsi V: Incorporation of leucocyte GPI-anchored proteins and protein tyrosine kinases into lipid-rich membrane domains of COS-7 cells. *Biochem Biophys Res Commun.* 1998 Feb 24; 243(3):706-10. < PMID: 9500981 >
- Menier C, Saez B, Horejsi V, Martinozzi S, Krawice-Radanne I, Bruel S, Le Danff C, Reboul M, Hilgert I, Rabreau M, Larrad ML, Pla M, Carosella ED, Rouas-Freiss N: Characterization of monoclonal antibodies recognizing HLA-G or HLA-E: new tools to analyze the expression of nonclassical HLA class I molecules. *Hum Immunol.* 2003 Mar; 64(3):315-26. < PMID: 12590976 >
- Romero X, Zapater N, Calvo M, Kalko SG, de la Fuente MA, Tovar V, Ockeloen C, Pizcueta P, Engel P: CD229 (Ly{09} lymphocyte cell surface receptor interacts homophilically through its N-terminal domain and relocalizes to the immunological synapse. *J Immunol.* 2005 Jun 1; 174(11):7033-42. < PMID: 15905546 >
- Omidvar N, Wang EC, Brennan P, Longhi MP, Smith RA, Morgan BP: Expression of glycosylphosphatidylinositol-anchored CD59 on target cells enhances human NK cell-mediated cytotoxicity. *J Immunol.* 2006 Mar 1; 176(5):2915-23. < PMID: 16493049 >
- Meraner P, Horejsi V, Wolpl A, Fischer GF, Stingl G, Maurer D: Dendritic cells sensitize TCRs through self-MHC-mediated Src family kinase activation. *J Immunol.* 2007 Feb 15; 178(4):2262-71. < PMID: 17277131 >

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

- Ide K, Wang H, Tahara H, Liu J, Wang X, Asahara T, Sykes M, Yang YG, Ohdan H: Role for CD47-SIRPalpha signaling in xenograft rejection by macrophages. Proc Natl Acad Sci USA. 2007 Mar 20; 104(12):5062-6. < PMID: 17360380 >
- Awasthi S, Wolf R, White G: Ontogeny and phagocytic function of baboon lung dendritic cells. Immunol Cell Biol. 2009 Jul; 87(5):419-27. < PMID: 19223853 >
- Sutherland DR, Keeney M, Illingworth A: Practical guidelines for the high-sensitivity detection and monitoring of paroxysmal nocturnal hemoglobinuria (PNH) clones by flow cytometry. Cytometry B Clin Cytom. 2012 Jul; 82(4):195-208. < PMID: 22499484 >

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