

TECHNICAL DATA SHEET

CyFlow™ CD16 Azide Free Anti-Hu; Clone MEM-154

REF BV863782

For Research Use Only.

Not for use in diagnostic or therapeutic procedures.

Specifications

Antigen	CD16
Alternative Names	FcγRIIIA, CD16a
Clone	MEM-154
Clonality	monoclonal
Format	Azide Free
Host / Isotype	Mouse / IgG1
Species Reactivity	Human
Negative Species Reactivity	—
Quantity [Concentration]	0.1 mg [1 mg/ml]
Immunogen	Human granulocytes

Specificity

The mouse monoclonal antibody MEM-154 reacts with an epitope on CD16 antigen that is residing in proximity to FG loop (probably BC or C'E loop). CD16 is a low affinity receptor for aggregated IgG (FcγRIII antigen). The antibody MEM-154 reacts with CD16+ granulocytes.

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Application

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

- Flow cytometry
- Immunoprecipitation
- Western blot
- Functional assays

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

CD16 (FcγRIII) is a 50-65 kDa glycoprotein serving as a low affinity IgG receptor. Human FcγRIII is expressed in two forms - FcγRIIIA and FcγRIIIB. FcγRIIIA is a transmembrane protein of monocytes, macrophages, NK cells and a subset of T cells. It is associated with FcεRI-γ subunit and is responsible for antibody-dependent NK cell cytotoxicity. Mast cell FcγRIIIA is associated, moreover, with FcεRI-β subunit. Besides IgG, FcγRIIIA can be triggered also by oligomeric IgE. FcγRIIIB is a GPI-linked monomeric receptor expressed on neutrophils and is involved in their activation and induction of a proadhesive phenotype.

References

- 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 >
- Gessner JE, Grussenmeyer T, Kolanus W, Schmidt RE: The human low affinity immunoglobulin G Fc receptor III-A and III-B genes: Molecular characterization of the promoter regions. J Biol Chem. 1995 Jan 20; 270(3):1350-61. < PMID: 7836402 >

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- de Haas M, Koene HR, Kleijer M, de Vries E, Simsek S, van Tol MJ, Roos D, von dem Borne AE: A triallelic Fc gamma receptor type IIIA polymorphism influences the binding of human IgG by NK cell Fc gamma RIIIA. J Immunol. 1996 Apr 15; 156(8):2948-55. < PMID: 8609432 >
- Tamm A, Schmidt RE: The binding epitopes of human CD16 (Fc gamma RIII) monoclonal antibodies: Implications for ligand binding. J Immunol. 1996 Aug 15; 157(4):1576-81. < PMID: 8759741 >
- Koene HR, Kleijer M, Algra J, Roos D, von dem Borne AE, de Haas M: Fc gammaRIIIa-158V/F polymorphism influences the binding of IgG by natural killer cell Fc gammaRIIIa, independently of the Fc gammaRIIIa-48L/R/H phenotype. Blood. 1997 Aug 1; 90(3):1109-14. < PMID: 9242542 >
- Kocher M, Siegel ME, Edberg JC, Kimberly RP: Cross-linking of Fc gamma receptor IIa and Fc gamma receptor IIIb induces different proadhesive phenotypes on human neutrophils. J Immunol. 1997 Oct 15; 159(8):3940-8. < PMID: 9378982 >
- Arase N, Arase H, Hirano S, Yokosuka T, Sakurai D, Saito T: IgE-mediated activation of NK cells through Fc gamma RIII. J Immunol. 2003 Mar 15; 170(6):3054-8. < PMID: 12626560 >
- Gasdaska JR, Sherwood S, Regan JT, Dickey LF: An afucosylated anti-CD20 monoclonal antibody with greater antibody-dependent cellular cytotoxicity and B-cell depletion and lower complement-dependent cytotoxicity than rituximab. Mol Immunol. 2012 Mar; 50(3):134-41. < PMID: 22305040 >

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

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