

TECHNICAL DATA SHEET

CyFlow™ CD16 Biotin Anti-Hu; Clone MEM-154

REF AE412174

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	Biotin
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

The reagent is designed for indirect immunofluorescence analysis by Flow Cytometry. Suggested working usage is 2 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

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 >
- 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 >

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- 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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