EXBIO Antibodies

PRODUCT DATA SHEET

10-214-C025

Monoclonal Antibody to CD16 Azide Free (0.025 mg)

Clone: MEM-154

Isotype: Mouse IgG1

Specificity: The antibody MEM-154 reacts with the epitope on CD16 antigen that residing in proximity to FG loop (probably BC or C'E loop). CD16 is a low affinity receptor for aggregated IgG (FcgammaRIII antigen). The antibody MEM-154 reacts with CD16+ granulocytes.
HLDA V; WS Code M MA068
HLDA V; WS Code NK NK51

Immunogen: Human granulocytes

Species Reactivity: Human

Application: Flow Cytometry
Recommended dilution: 5-10 µg/ml
Positive control: PBL (peripheral blood lymphocytes)
Application note: The antibody MEM-154 does not react with CD16a present on NK cells in many subjects.
Immunoprecipitation
Western Blotting
Application note: Non-reducing conditions.
Functional Application
The antibody MEM-154 blocks binding of human IgG to FcgammaRIII.

Purity: > 95% (by SDS-PAGE)

Purification: Purified from hybridoma culture supernatant by protein A-affinity chromatography.

Concentration: 1 mg/ml

Storage Buffer: Azide free phosphate buffered saline (PBS), approx. pH 7.4; 0.2 µm filter sterilized.

Storage / Stability: Store at 2-8°C. Do not use after expiration date stamped on vial label. For long-term storage aliquot and store at -20°C. Avoid freeze/thaw cycles.

Expiration: See vial label

Lot Number: See vial label

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

For laboratory research only, not for drug, diagnostic or other use.

EXBIO Praha | Nad Safinou II 341 | 252 42 Vestec u Prahy | Czech Republic
Tel: +420 261 090 664 | Fax: +420 261 090 660 | orders@exbio.cz | www.exbio.cz

References:

*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.
*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.
*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.
*Leukocyte Typing V., Schlossman S. et al. (Eds.), Oxford University Press (1995).
*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):3948-55.
*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.
*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.
*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

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