

TECHNICAL DATA SHEET

CyFlow™ CD16 Pacific Blue™ Anti-Hu; Clone 3G8

REF AH825026

For Research Use Only.

Not for use in diagnostic or therapeutic procedures.

Specifications

Antigen	CD16
Alternative Names	FcγRIIIA, CD16a
Clone	3G8
Clonality	monoclonal
Format	Pacific Blue™
Host / Isotype	Mouse / IgG1
Species Reactivity	Human, Non-Human Primates
Negative Species Reactivity	—
Quantity	100 tests
Immunogen	Human neutrophils

Specificity

The mouse monoclonal antibody 3G8 recognizes CD16 antigen, a low affinity receptor for aggregated IgG (FcγRIII antigen). CD16 exists in two different isoforms: CD16a (FcγRIIIA; 50-65 kDa; expressed on

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NK-cells, monocytes and macrophages) and CD16b (FcγRIIIB; 48 kDa; mainly expressed on neutrophils).

Application

The reagent is designed for Flow Cytometry analysis of human blood cells. Recommended usage is 4 µl reagent / 100 µl of whole blood or 10⁶ cells in a suspension. The content of a vial (0.4 ml) is sufficient for 100 tests.

Other usages may be determined from the scientific literature.

Storage Buffer

The reagent is provided in stabilizing 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

- 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 >
- 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 >

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- Metes D, Ernst LK, Chambers WH, Sulica A, Herberman RB, Morel PA: Expression of functional CD32 molecules on human NK cells is determined by an allelic polymorphism of the FcγRIIC gene. *Blood*. 1998 Apr 1; 91(7):2369-80. < PMID: 9516136 >
- Zhu X, Hamann KJ, Muñoz NM, Rubio N, Mayer D, Herrnreiter A, Leff AR: Intracellular expression of Fc γRIII (CD16) and its mobilization by chemoattractants in human eosinophils. *J Immunol*. 1998 Sep 1; 161(5):2574-9. < PMID: 9725258 >
- Wijngaarden S, van Roon JA, van de Winkel JG, Bijlsma JW, Lafeber FP: Down-regulation of activating Fcγ receptors on monocytes of patients with rheumatoid arthritis upon methotrexate treatment. *Rheumatology (Oxford)*. 2005 Jun; 44(6):729-34. < PMID: 15757966 >
- Komano Y, Nanki T, Hayashida K, Taniguchi K, Miyasaka N: Identification of a human peripheral blood monocyte subset that differentiates into osteoclasts. *Arthritis Res Ther*. 2006; 8(5):R152. < PMID: 16987426 >
- Congy-Jolivet N, Bolzec A, Ternant D, Ohresser M, Watier H, Thibault G: Fc γRIIIa expression is not increased on natural killer cells expressing the Fc γRIIIa-158V allotype. *Cancer Res*. 2008 Feb 15; 68(4):976-80. < PMID: 18281470 >
- Choi EI, Wang R, Peterson L, Letvin NL, Reimann KA: Use of an anti-CD16 antibody for in vivo depletion of natural killer cells in rhesus macaques. *Immunology*. 2008 Jun; 124(2):215-22. < PMID: 18201184 >
- Burt BM, Plitas G, Zhao Z, Bamboat ZM, Nguyen HM, Dupont B, DeMatteo RP: The lytic potential of human liver NK cells is restricted by their limited expression of inhibitory killer Ig-like receptors. *J Immunol*. 2009 Aug 1; 183(3):1789-96. < PMID: 19587011 >

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