

## Anti-Human CD16 Antibody, Clone 3G8, PE

## Antibodies

Mouse monoclonal IgG1 antibody  
against human, rhesus, cynomolgus  
CD16, PE-conjugated

Catalog #60041PE  
#60041PE.1

100 Tests 5 µL/test  
25 Tests 5 µL/test



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## Product Description

The 3G8 antibody reacts with CD16 (FcγRIII or low affinity IgG receptor III), a type 1 transmembrane glycoprotein belonging to the Ig superfamily. CD16 exists in two distinct isoforms: CD16a, a 50 - 65 kDa form expressed on NK cells, activated monocytes, macrophages, and placental trophoblasts, and CD16b, an ~48 kDa glycosylphosphatidylinositol (GPI)-anchored form expressed on neutrophils, basophils and eosinophils and found as at least two polymorphic variants, termed NA1 and NA2. CD16 binds weakly to the Fc region of monomeric, aggregated or complexed IgG, particularly the IgG1 and IgG3 isotypes. Binding of IgG to either CD16 isoform induces signaling pathways that modulate several types of responses, including antibody-dependent cell-mediated cytotoxicity (ADCC), phagocytosis, cytokine release and proliferation. CD16/IgG interactions can result in non-specific labeling in antibody-based detection and cell separation experiments and the 3G8 antibody may be employed as a blocking antibody to reduce non-specific binding.

|                      |  |
|----------------------|--|
| Target Antigen Name: | CD16   |
| Alternative Names:   | CD16A, CD16B, Fc-gamma RIII; FCG3; FCGR3; FCGRIII; FcγRIII; FCR-10, FcRIII, IGFR3, IMD20   |
| Gene ID:             | 2214   |
| Species Reactivity:  | Human, Rhesus, Cynomolgus, Baboon, Capuchin Monkey, Chimpanzee, Common Marmoset, Cotton-topped Tamarin, Pigtailed Macaque, Sooty Mangabey, Squirrel Monkey |
| Host Species:        | Mouse  |
| Clonality:           | Monoclonal   |
| Clone:               | 3G8  |
| Isotype:             | IgG1, kappa  |
| Immunogen:           | Human polymorphonuclear leukocytes   |
| Conjugate:           | PE   |

## Applications

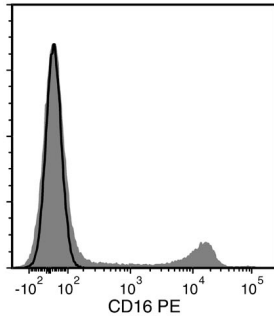
|                       |  |
|-----------------------|--|
| Verified:             | FC   |
| Reported:             | CellSep, FC  |
| Special Applications: | This antibody clone has been verified for use as a CD16 (FcγRIII receptor) blocking and/or labeling antibody with EasySep™ and RosetteSep™ Human kits. |

Abbreviations: CellSep: Cell separation; ChIP: Chromatin immunoprecipitation; FA: Functional assay; FACS: Fluorescence activated cell sorting; FC: Flow cytometry; ICC: Immunocytochemistry; IF: Immunofluorescence microscopy; IHC: Immunohistochemistry; IP: Immunoprecipitation; RIA: Radioimmunoassay; WB: Western blotting

## Properties

|                        |  |
|------------------------|--|
| Formulation:           | Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and 0.2% (w/v) bovine serum albumin   |
| Purification:          | The antibody was purified by affinity chromatography and conjugated with PE under optimal conditions. The solution is free of unconjugated PE.   |
| Stability and Storage: | Product stable at 2 - 8°C when stored undiluted. Do not freeze. Protect product from prolonged exposure to light. For product expiry date, please contact techsupport@stemcell.com.  |
| Directions for Use:    | For flow cytometry the suggested use of this antibody is ≤ 5 µL per 1 × 10 <sup>6</sup> cells in 100 µL volume or per 100 µL of whole blood. It is recommended that the antibody be titrated for optimal performance for each application. |

## Data



Flow cytometry analysis of human peripheral blood mononuclear cells (PBMCs) labeled with Anti-Human CD16 Antibody, Clone 3G8, PE (filled histogram) or Mouse IgG1, kappa Isotype Control Antibody, Clone MOPC-21, PE (Catalog #60070PE) (solid line histogram).

## Related Products

For a complete list of antibodies, including other conjugates, sizes and clones, as well as related products available from STEMCELL Technologies, please visit our website at [www.stemcell.com/antibodies](http://www.stemcell.com/antibodies) or contact us at [techsupport@stemcell.com](mailto:techsupport@stemcell.com).

## References

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2. Liu M et al. (2011) Vitellogenin mediates phagocytosis through interaction with Fc $\gamma$ R. *Mol Immunol* 49(1-2): 211–8. (FA, ICC, IF)
3. Choi EI et al. (2008) Use of an anti-CD16 antibody for in vivo depletion of natural killer cells in rhesus macaques. *Immunology* 124(2): 215–22. (Depletion, ELISA, FC)
4. Congy-Jolivet N et al. (2008) Fc gamma RIIIa expression is not increased on natural killer cells expressing the Fc gamma RIIIa-158V allotype. *Cancer Res* 68(4): 976–80. (ELISA, FC)
5. Smed-Sørensen A et al. (2008) IgG regulates the CD1 expression profile and lipid antigen-presenting function in human dendritic cells via Fc gamma RIIIa. *Blood* 111(10): 5037–46. (Blocking, FA, FC)
6. Rogers KA et al. (2006) IgG Fc receptor III homologues in nonhuman primate species: genetic characterization and ligand interactions. *J Immunol* 177(6): 3848–56. (Blocking, FA, FC)
7. Da Silva DM et al. (2001) Physical interaction of human papillomavirus virus-like particles with immune cells. *Int Immunol* 13(5): 633–41. (Blocking, FA, IHC)
8. Wirthmueller U et al. (1992) Signal transduction by Fc gamma RIII (CD16) is mediated through the gamma chain. *J Exp Med* 175(5): 1381–90. (FC, FA, IP)
9. Fleit HB et al. (1982) Human neutrophil Fc gamma receptor distribution and structure. *Proc Natl Acad Sci USA* 79(10): 3275–9. (Blocking, FA, ICC, IF, IP)

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