Purified anti-human CD16 Antibody

Catalog# / Size	360701 / 25 µg 360702 / 100 µg
Clone	B73.1
Regulatory Status	RUO
Other Names	FcγRIII, IGFR3, FCG3, FCGR3, FCGRIII, Fc gamma receptor, Fc gamma receptor 3
Isotype	Mouse IgG1, κ
Description	CD16 is known as low affinity IgG receptor III (FcγRIII). It is expressed as two distinct forms (CD16a and CD16b). CD16a (FcγRIIIA) is a 50-65 kD polypeptide-anchored transmembrane protein. It is expressed on the surface of NK cells, activated monocytes, macrophages, a subset of T cells and placental trophoblasts in humans. CD16b (FcγRIIIB) is a 48 kD glycosylphosphatidylinositol (GPI)-anchored protein. Its extracellular domain is over 95% homologous to that of CD16a, and it is expressed specifically on neutrophils. CD16 binds aggregated IgG or IgG-antigen complex which functions in NK cell activation, phagocytosis, and antibody-dependent cell-mediated cytotoxicity (ADCC).

Product Details

Verified Reactivity	Human
Antibody Type	Monoclonal
Host Species	Mouse
Immunogen	NK cell-enriched fraction from human peripheral blood.
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
Preparation	The antibody was purified by affinity chromatography.
Concentration	0.5 mg/ml
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C.
Application	FC - Quality tested
Recommended Usage	Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis. For flow cytometric staining, the suggested use of this reagent is ≤1.0 µg per million cells in 100 µl volume. It is recommended that the reagent be titrated for optimal performance for each application.
Application Notes	The epitope recognized by clone B73.1 is in the first membrane distal Ig-like domain of the CD16 molecule, which is different from that of clone 3G8[4]. Donor variability has been observed for clone B73.1 staining[1], especially on granulocytes.

Application References

1. Perussia B, *et al.* 1983. *J. Immunol.* 130:2133.
2. Lanier LL, *et al.* 1985. *J. Exp. Med.* 162:2089.
3. Perussia B, *et al.* 1984. *J. Immunol.* 133:180.
4. Grier JT, *et al.* 2012. *J. Clin. Invest.* 122:3769. (Epitope)

Product Citations

1. Kaufmann M, *et al.* 2021. Med. 2(3):296-312.e8. PubMed
2. Sigal N, *et al.* 2022. Methods Mol Biol. 2543:113. PubMed
3. Cheung P, *et al.* 2018. Cell. 173:1385. PubMed
4. Prodjinotho UF, *et al.* 2017. PLoS Negl Trop Dis. 11:e0005777. PubMed
5. Roussel M, *et al.* 2021. Cell Reports Medicine. 2(6):100291. PubMed
6. Waugh KA, *et al.* 2020. Cell Reports. 29(7):1893-1908.e4.. PubMed

RRID AB_2562692 (BioLegend Cat. No. 360701)

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Antigen Details

Structure	Ig superfamily, transmembrane form (50-65 kD) or GPI-linked form (48 kD)
Distribution	NK cells, activated monocytes, macrophages, neutrophils and a subset of T cells
Function	Low affinity IgG Fc receptor, phagocytosis, ADCC
Ligand/Receptor	IgG Fc receptor III (FcγRIII)
Cell Type	Macrophages, Monocytes, Neutrophils, NK cells, T cells
Biology Area	Immunology, Innate Immunity
Molecular Family	CD Molecules, Fc Receptors
Antigen References	1. Schubert J, *et al.* 1989. In Leucocyte Typing IV (Knapp W, ed) Oxford University Press Oxford pp 711. 2. Palmer BE, *et al.* 2005. *J. Immunol.* 175:8415. 3. Schachner M and Martini R. 1995. *Trends Neurosci.* 18:183. 4. Wood KL, *et al.* 2005. *Clin. Immunol.* 117:294. 5. Björkström NK, *et al.* 2008. *J. Immonol.* 181:4219.
Gene ID	2214 2215

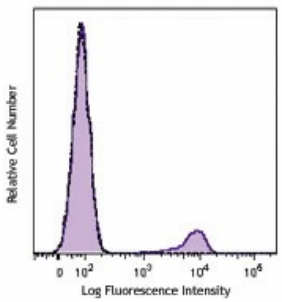
Related Protocols

Cell Surface Flow Cytometry Staining Protocol

Other Formats

Purified anti-human CD16, PE anti-human CD16, APC anti-human CD16, PE/Cyanine7 anti-human CD16, APC/Cyanine7 anti-human CD16, PerCP/Cyanine5.5 anti-human CD16, Alexa Fluor® 647 anti-human CD16, FITC anti-human CD16, Alexa Fluor® 700 anti-human CD16, PerCP anti-human CD16, PE/Dazzle™ 594 anti-human CD16, Brilliant Violet 421™ anti-human CD16, APC/Fire™ 750 anti-human CD16, Brilliant Violet 605™ anti-human CD16, Brilliant Violet 711™ anti-human CD16, Brilliant Violet 510™ anti-human CD16, Brilliant Violet 785™ anti-human CD16, PE/Cyanine5 anti-human CD16

Product Data



Human peripheral blood lymphocytes were stained with purified CD16 (clone B73.1) (filled histogram) or purified mouse IgG1, κ isotype control (open histogram), followed by anti-mouse IgG FITC.

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