PerCP/Fire™ 806 anti-human CD16 Antibody

Catalog# / Size	302093 / 25 tests 302094 / 100 tests
Clone	3G8
Regulatory Status	RUO
Workshop	V NK80
Other Names	FcγRIII, 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, 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, Cynomolgus, Rhesus
Reported Reactivity	African Green, Baboon, Capuchin Monkey, Chimpanzee, Common Marmoset, Pigtailed Macaque, Sooty Mangabey, Squirrel Monkey
Antibody Type	Monoclonal
Host Species	Mouse
Immunogen	Human PMN cells
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA)
Preparation	The antibody was purified by affinity chromatography and conjugated with PerCP/Fire™ 806 under optimal conditions.
Concentration	Lot-specific (to obtain lot-specific concentration and expiration, please enter the lot number in our Certificate of Analysis online tool.)
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. **Do not freeze**.
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 5 µL per million cells in 100 µL staining volume or 5 µL per 100 µL of whole blood. It is recommended that the reagent be titrated for optimal performance for each application. * PerCP/Fire™ 806 has a maximum excitation of 478 nm and a maximum emission of 806 nm.
Excitation Laser	Blue Laser (488 nm)
Application Notes	The 3G8 antibody clone blocks neutrophil phagocytosis and stimulates NK cell proliferation. It has been reported that this clone interacts with the FcγRIIa and FcγRIIIb receptors causing neutrophil activation and aggregation[18]. Due to this phenomenon staining in whole blood may cause a reduction in the number of granulocytes or alter their scatter profile. Additional reported applications (for the relevant formats) include: immunohistochemical staining of acetone-fixed frozen tissue sections[6], immunoprecipitation[3], stimulation of NK cell proliferation[4], blocking of phagocytosis[5], and blocking of immunoglobulin binding to FcγRIII[7,8]. The Ultra-LEAF™

purified antibody (Endotoxin < 0.01 EU/µg, Azide-Free, 0.2 µm filtered) is recommended for functional assays (Cat. No. 302049, 302050, 302057, 302058).

Application References

(PubMed link indicates BioLegend citation)

1. Knapp W, *et al.* Eds. 1989. Leucocyte Typing IV. Oxford University Press. New York.
2. Schlossman S, *et al.* Eds. 1995. Leucocyte Typing V. Oxford University Press. New York.
3. Edberg J, *et al.* 1997. *J. Immunol.* 159:3849. (IP)
4. Hoshino S, *et al.* 1991. *Blood* 78:3232. (Stim)
5. Tamm A, *et al.* 1996. *Immunol.* 157:1576. (Block)
6. Da Silva DM, *et al.* 2001. *Int. Immunol.* 13:633. (IHC)
7. Holl V, *et al.* 2004. *J. Immunol.* 173:6274. (Block)
8. Hober D, *et al.* 2002. *J. Gen. Virol.* 83:2169. (Block)
9. Brainard DM, *et al.* 2009. *J. Virol.* 83:7305. PubMed
10. Smed-Sörensen A, *et al.* 2008. *Blood* 111:5037. (Block) PubMed
11. Timmerman KL, *et al.* 2008. *J. Leukoc. Biol.* 84:1271. (FC) PubMed
12. Yoshino N, *et al.* 2000. *Exp. Anim. (Tokyo)* 49:97. (FC)

See More

RRID

AB_3675025 (BioLegend Cat. No. 302093)
AB_3675025 (BioLegend Cat. No. 302094)

Antigen Details

Structure	Ig superfamily, transmembrane form (50-65 kD) or GPI-linked form (48 kD)
Distribution	NK cells, activated monocytes, macrophages, neutrophils
Function	Low affinity IgG Fc receptor, phagocytosis, ADCC
Ligand/Receptor	Aggregated IgG, IgG-antigen complex
Cell Type	Dendritic cells, Macrophages, Monocytes, Neutrophils, NK cells
Biology Area	Immunology, Innate Immunity
Molecular Family	CD Molecules, Fc Receptors

Antigen References

1. Fleit H, *et al.* 1982. *P. Natl. Acad. Sci. USA* 79:3275.
2. Stroncek D, *et al.* 1991. *Blood* 77:1572.
3. Wirthmueller U, *et al.* 1992. *J. Exp. Med.* 175:1381.

Gene ID 2214

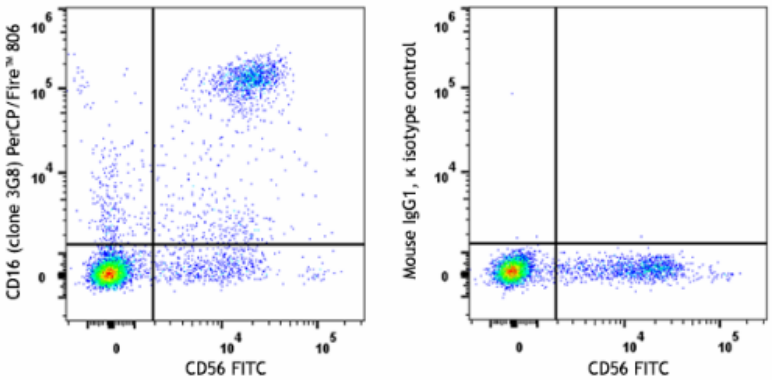
Related Protocols

- Cell Surface Flow Cytometry Staining Protocol

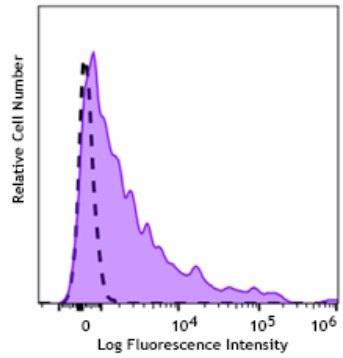
Other Formats

APC anti-human CD16, Biotin anti-human CD16, FITC anti-human CD16, Brilliant Violet 711™ anti-human CD16, PE anti-human CD16, PE/Cyanine5 anti-human CD16, Purified anti-human CD16, APC/Cyanine7 anti-human CD16, PE/Cyanine7 anti-human CD16, Alexa Fluor® 488 anti-human CD16, Alexa Fluor® 647 anti-human CD16, Pacific Blue™ anti-human CD16, Alexa Fluor® 700 anti-human CD16, PerCP/Cyanine5.5 anti-human CD16, PerCP anti-human CD16, Brilliant Violet 421™ anti-human CD16, Brilliant Violet 570™ anti-human CD16, Brilliant Violet 605™ anti-human CD16, Brilliant Violet 650™ anti-human CD16, Brilliant Violet 785™ anti-human CD16, Brilliant Violet 510™ anti-human CD16, Ultra-LEAF™ Purified anti-human CD16, Purified anti-human CD16 (Maxpar® Ready), PE/Dazzle™ 594 anti-human CD16, APC/Fire™ 750 anti-human CD16, TotalSeq™-A0083 anti-human CD16, TotalSeq™-B0083 anti-human CD16, TotalSeq™-C0083 anti-human CD16, PE/Fire™ 640 anti-human CD16, Spark YG™ 581 anti-human CD16, TotalSeq™-D0083 anti-human CD16, APC/Fire™ 810 anti-human CD16, GMP APC anti-human CD16, GMP PE/Dazzle™ 594 anti-human CD16, GMP PE anti-human CD16, Spark Red™ 718 anti-human CD16, GMP Pacific Blue™ anti-human CD16, GMP FITC anti-human CD16, Spark Blue™ 515 anti-human CD16, Spark UV™ 387 anti-human CD16, GMP PE/Cyanine7 anti-human CD16, GMP APC/Fire™ 750 anti-human CD16, Brilliant Violet 750™ anti-human CD16, Spark Blue™ 550 anti-human CD16, GMP PerCP/Cyanine5.5 anti-human CD16, Spark YG™ 593 anti-human CD16, Spark NIR™ 685 anti-human CD16, Spark Violet™ 500 anti-human CD16, Spark Blue™ 574 anti-human CD16 (Flexi-Fluor™), Spark PLUS UV395™ anti-human CD16, PerCP/Fire™ 806 anti-human CD16, PE/Fire™ 744 anti-human CD16 Antibody, PE/Fire™ 700 anti-human CD16 Antibody

Product Data



Human peripheral blood lymphocytes were stained with anti-human CD56 (clone HCD56) FITC and anti-human CD16 (clone 3G8) PerCP/Fire™ 806 (left) or mouse IgG1, κ PerCP/Fire™ 806 isotype control (right).



Human peripheral blood monocytes were stained with anti-human CD16 (clone 3G8) PerCP/Fire™ 806 (filled histogram) or mouse IgG1, κ PerCP/Fire™ 806 isotype control (open histogram).

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