

Alexa Fluor® 488 anti-human CD16

Catalog # / Size: 302022 / 25 tests
302019 / 100 tests

Clone: 3G8

Isotype: Mouse IgG1, κ

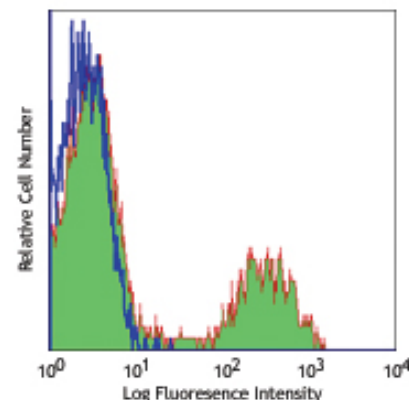
Workshop Number: V NK80

Reactivity: Human, **Cross-Reactivity:** Chimpanzee, Baboon, Cynomolgus, Rhesus, Pigtailed Macaque, Capuchin Monkey, Squirrel Monkey, Sooty Mangabey, Cotton-topped Tamarin, Marmoset

Preparation: The antibody was purified by affinity chromatography, and conjugated with Alexa Fluor® 488 under optimal conditions. The solution is free of unconjugated Alexa Fluor® 488.

Formulation: Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and 0.2% (w/v) BSA (origin USA).

Storage: The antibody solution should be stored undiluted at 4°C and protected from prolonged exposure to light. **Do not freeze.**



Human peripheral blood lymphocytes stained with 3G8 Alexa Fluor® 488

Applications:

Applications: FC - Quality tested

Recommended Usage: Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis. For immunofluorescent staining, the suggested use of this reagent is 5 µl per million cells or 5 µl per 100 µl of whole blood. It is recommended that the reagent be titrated for optimal performance for each application.

* Alexa Fluor® 488 has a maximum emission of 519 nm when it is excited at 488 nm.

** Alexa Fluor® is a registered trademark of Molecular Probes, Inc. Alexa Fluor® dye antibody conjugates are sold under license from Molecular Probes, Inc. for research use only, except for use in combination with microarrays and high content screening, and are covered by pending and issued patents.

Application Notes: The 3G8 antibody blocks neutrophil phagocytosis and stimulates NK cell proliferation. Additional reported applications (for the relevant formats) include: immunohistochemical staining of acetone-fixed frozen tissue sections⁶, immunoprecipitation³, stimulation of NK cell proliferation⁴, blocking of phagocytosis⁵, and blocking of immunoglobulin binding to FcγRIII^{7,8}. The LEAF™ purified antibody (Endotoxin <0.1 EU/µg, Azide-Free, 0.2 µm filtered) is recommended for functional assays (Cat. No. 302014). For highly sensitive assays, we recommend Ultra-LEAF™ purified antibody (Cat. No. 302050) with a lower endotoxin limit than standard LEAF™ purified antibodies (Endotoxin <0.01 EU/µg).

- Application References:**
- Knapp W, *et al.* Eds. 1989. Leucocyte Typing IV. Oxford University Press. New York.
 - Schlossman S, *et al.* Eds. 1995. Leucocyte Typing V. Oxford University Press. New York.
 - Edberg J, *et al.* 1997. *J. Immunol.* 159:3849. (IP)
 - Hoshino S, *et al.* 1991. *Blood* 78:3232. (Stim)
 - Tamm A, *et al.* 1996. *Immunol.* 157:1576. (Block)
 - Da Silva DM, *et al.* 2001. *Int. Immunol.* 13:633. (IHC)
 - Holl V, *et al.* 2004. *J. Immunol.* 173:6274. (Block)
 - Hober D, *et al.* 2002. *J. Gen. Virol.* 83:2169. (Block)
 - Brainard DM, *et al.* 2009. *J. Virol.* 83:7305. PubMed
 - Smed-Sørensen A, *et al.* 2008. *Blood* 111:5037. (Block) PubMed
 - Timmerman KL, *et al.* 2008. *J. Leukoc. Biol.* 84:1271. (FC) PubMed
 - Yoshino N, *et al.* 2000. *Exp. Anim. (Tokyo)* 49:97. (FC)
 - Rout N, *et al.* 2010. *PLoS One* 5:e9787. (FC)
 - Kim WK, *et al.* 2006. *Am. J. Pathol.* 168:822. (FC)
 - Boltz A, *et al.* 2011. *J. Biol Chem.* 286:21896. PubMed

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).

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



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Related Products:Product

Cell Staining Buffer
RBC Lysis Buffer (10X)
Alexa Fluor® 488 Mouse IgG1, κ Isotype Ctrl (FC)
Human TruStain FcX™ (Fc Receptor Blocking Solution)

Clone

MOPC-21

Application

FC, ICC, ICFC
FC, ICFC
FC, IF
FC, ICC, ICFC



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