

Alexa Fluor® 700 anti-human CD16

Catalog # / Size: 2110130 / 100 µg
2110125 / 25 µg

Clone: 3G8

Isotype: Mouse IgG1, κ

Immunogen: Human PMN cells

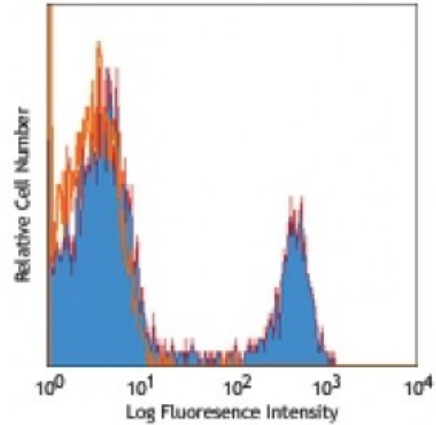
Reactivity: Human

Preparation: The antibody was purified by affinity chromatography, and conjugated with Alexa Fluor® 700 under optimal conditions.

Formulation: Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.

Workshop Number: V NK80

Concentration: 0.5



Human peripheral blood lymphocytes stained with 3G8 Alexa fluor® 700

Applications:

Applications: Flow Cytometry

Recommended Usage: Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis. The suggested use of this reagent is ≤2.0 microg per million cells in 100 microL volume. It is highly recommended that the reagent be titrated for optimal performance for each application.

* Alexa Fluor® 700 has a maximum emission of 719 nm when it is excited at 633 nm / 635 nm. Prior to using Alexa Fluor® 700 conjugate for flow cytometric analysis, please verify your flow cytometer's capability of exciting and detecting the fluorochrome.

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/microg).

- Application References:**
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 2. Schlossman S, *et al.* Eds. 1995. Leucocyte Typing V. Oxford University Press. New York.
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 4. Hoshino S, *et al.* 1991. *Blood* 78:3232. (Stim)
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 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](#)
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 12. Yoshino N, *et al.* 2000. *Exp. Anim. (Tokyo)* 49:97. (FC)
 13. Rout N, *et al.* 2010. *PLoS One* 5:e9787. (FC)
 14. Kim WK, *et al.* 2006. *Am. J. Pathol.* 168:822. (FC)
 15. Boltz A, *et al.* 2011. *J. Biol Chem.* 286:21896. [PubMed](#)
 16. Wu Z, *et al.* 2013. *J. Virol.* 87:7717. [PubMed](#)
 17. Meatcalf Pate KQ, *et al.* 2015. *J Infect Dis.* [PubMed](#)
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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:
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.