

Purified anti-human CD16

Catalog # / Size: 302001 / 25 µg
302002 / 100 µg

Clone: 3G8

Isotype: Mouse IgG1, κ

Workshop Number: V NK80

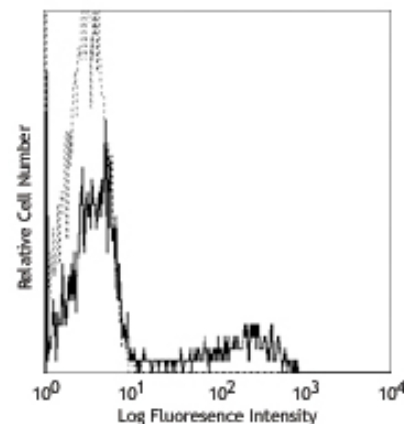
Reactivity: Human, **Cross-Reactivity:** Chimpanzee, Baboon, Cynomolgus, Rhesus, Pigtailed Macaque, Capuchin Monkey, Squirrel Monkey, Sooty Mangabey, Cotton-topped Tamarin, Marmoset

Preparation: The antibody was purified by affinity chromatography.

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

Concentration: 0.5 mg/ml

Storage: The antibody solution should be stored undiluted at 4°C.



Human peripheral blood lymphocytes stained with purified 3G8 and anti-mouse IgGs FITC

Applications:

Applications: FC - Quality tested
IP, IHC - Reported in the literature
CyTOF® - Validated

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 ≤2.0 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 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.

Related Products:	Product	Clone	Application
	Purified anti-human CD64	10.1	FC, IHC
	Purified anti-human CD32	FUN-2	FC, IHC
	Purified Mouse IgG1, κ Isotype Ctrl	MOPC-21	FC, ICFC, ICC, IF, IHC, IP, WB



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AKP Goat anti-mouse IgG (minimal x-reactivity)	Poly4053	ELISA, WB, IHC
APC Goat anti-mouse IgG (minimal x-reactivity)	Poly4053	FC
Biotin Goat anti-mouse IgG (minimal x-reactivity)	Poly4053	FC, ELISA, IHC, IF, WB
FITC Goat anti-mouse IgG (minimal x-reactivity)	Poly4053	FC
HRP Goat anti-mouse IgG (minimal x-reactivity)	Poly4053	ELISA, IHC, WB
PE Goat anti-mouse IgG (minimal x-reactivity)	Poly4053	FC
Cell Staining Buffer		FC, ICC, ICFC
RBC Lysis Buffer (10X)		FC, ICFC
Purified anti-human CD56 (NCAM)	MEM-188	FC, IHC, IP, WB



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