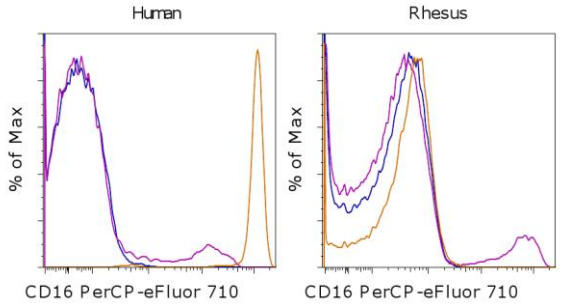
Anti-Human/Non-Human Primate CD16 PerCP-eFluor® 710

Catalog Number: 46-0166
Also known as: FcgRIII, FcgR3, ADCC receptor
RUO: For Research Use Only. Not for use in diagnostic procedures.



Staining of normal human (left) and rhesus (right) peripheral blood cells with Mouse IgG1 K Isotype Control PerCP-eFluor® 710 (cat. 46-4714) (blue histogram) or Anti-Human/Non-Human Primate CD16 PerCP-eFluor® 710. Cells in the lymphocyte (purple histogram) and granulocyte (orange histogram) gates were used for analysis.

Product Information

Contents: Anti-Human/Non-Human Primate CD16 PerCP-eFluor® 710
REF **Catalog Number:** 46-0166
Clone: 3G8
Concentration: 5 uL (0.125 ug)/test
Host/Isotype: Mouse IgG1

Formulation: aqueous buffer, 0.09% sodium azide, may contain carrier protein/stabilizer
Temperature Limitation: Store at 2-8°C. Do not freeze. Light-sensitive material.
LOT **Batch Code:** Refer to vial
Use By: Refer to vial
Contains sodium azide

Description

This 3G8 monoclonal antibody reacts with human and non-human primate CD16, which is also known as the low-affinity FcγRIII. CD16 exists as two distinct isoforms, FcγRIIIA and FcγRIIIB. In humans, FcγRIIIA is expressed as a polypeptide-anchored form on monocytes, macrophages, and lymphocytes such as NK cells. T and B cells do not express this Fc receptor. FcγRIIIB is also detected on neutrophils as a GPI-anchored form. Expression of CD16 on lymphocytes and monocytes is similar in non-human primates. However, while CD16 is not found on neutrophils in macaques and baboons, this receptor is detected on these cells in sooty mangabeys. Binding of IgG leads to activation of signal transduction pathways, resulting in antibody-dependent cell-mediated cytotoxicity (ADCC), phagocytosis, cytokine release, and antigen presentation.

This monoclonal antibody has been reported to have several functional activities, including inhibition of cytotoxic ability, activation of cell signaling, and NK cell depletion *in vivo*. Moreover, the 3G8 antibody clone has been demonstrated to work on capuchin monkey, chimpanzee, common marmoset, cynomologous monkey, hamadyras baboon, olive baboon, pigtailed macaque, rhesus, and squirrel monkey.

Based on cross-blocking studies 3G8 recognizes the same epitope as CB16. However, 3G8 and B73.1 antibody clones bind distinct epitopes.

Applications Reported

This 3G8 antibody has been reported for use in flow cytometric analysis.

Applications Tested

This 3G8 antibody has been pre-titrated and tested by flow cytometric analysis of normal human and rhesus peripheral blood cells. This can be used at 5 µL (0.125 µg) per test. A test is defined as the amount (µg) of antibody that will stain a cell sample in a final volume of 100 µL. Cell number should be determined empirically but can range from 10^5 to 10^8 cells/test.

PerCP-eFluor® 710 can be used in place of PE-Cy5, PE-Cy5.5 or PerCP-Cy5.5. PerCP-eFluor® 710 emits at

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710 nm and is excited with the blue laser (488 nm). Please make sure that your instrument is capable of detecting this fluorochrome. For a filter configuration, we recommend using the 685 LP dichroic mirror and 710/40 band pass filter, however the 695/40 band pass filter is an acceptable alternative.

Fixation: Samples can be stored in IC Fixation Buffer (cat. 00-8222) (100 uL cell sample + 100 uL IC Fixation Buffer) or 1-step Fix/Lyse Solution (cat. 00-5333) for up to 3 days in the dark at 4°C with minimal impact on brightness and FRET efficiency/compensation. Some generalizations regarding fluorophore performance after fixation can be made, but clone specific performance should be determined empirically.

References

Choi EI, Wang R, Peterson L, Letvin NL, Reimann KA. Use of an anti-CD16 antibody for in vivo depletion of natural killer cells in rhesus macaques. Immunology. 2008 Jun;124(2):215-22. (**3G8**, FA, FC)

Rogers KA, Scinicariello F, Attanasio R. IgG Fc receptor III homologues in nonhuman primate species: genetic characterization and ligand interactions. J Immunol. 2006 Sep 15;177(6):3848-56. (**3G8**, FC)

Naziruddin B, Duffy BF, Tucker J, Mohanakumar T. Evidence for cross-regulation of Fc gamma RIIIB (CD16) receptor-mediated signaling by Fc gamma RII (CD32) expressed on polymorphonuclear neutrophils. J Immunol. 1992 Dec 1;149(11):3702-9. (**3G8**, FA)

Perussia B, Trinchieri G. Antibody 3G8, specific for the human neutrophil Fc receptor, reacts with natural killer cells. J Immunol. 1984 Mar;132(3):1410-5. (**3G8**, FC)

Related Products

46-4714 Mouse IgG1 K Isotype Control PerCP-eFluor® 710 (P3.6.2.8.1)

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