

CD16 Monoclonal Antibody (3G8), PerCP-eFluor™ 710, eBioscience™

Product Details	
Size	100 Tests
Species Reactivity	Baboon, Chimpanzee, Cynomolgus monkey, Human, Non-human primate, Rhesus monkey
Host/Isotype	Mouse / IgG1
Recommended Isotype Control	Mouse IgG1 kappa Isotype Control (P3.6.2.8.1), PerCP-eFluor™ 710, eBioscience™
Class	Monoclonal
Type	Antibody
Clone	3G8
Conjugate	PerCP-eFluor™ 710
Excitation/Emission Max	482/708 nm
Form	Liquid
Concentration	5 µL/Test
Purification	Affinity chromatography
Storage buffer	PBS, pH 7.2, with 0.2% BSA
Contains	0.09% sodium azide
Storage conditions	4° C, store in dark, DO NOT FREEZE!
RRID	AB_10670074

Applications	Tested Dilution	Publications
Flow Cytometry (Flow)	5 µL (0.125 µg)/test	1 Publication

Product Specific Information

Description: This 3G8 monoclonal antibody reacts with human and non-human primate CD16, which is also known as the low-affinity Fc gamma RIII. CD16 exists as two distinct isoforms, Fc gamma RIIIA and Fc gamma RIIIB. In humans, Fc gamma RIIIA 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. Fc gamma RIIIB 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, cynomolgous monkey, hamadryas 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 10⁴ to 10⁸ cells/test.

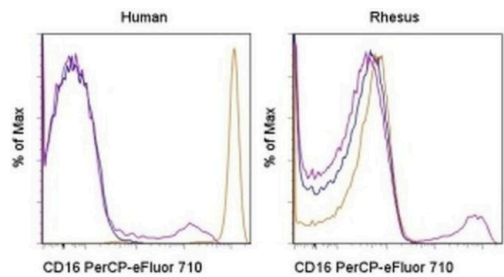
PerCP-eFluor® 710 emits at 710 nm and is excited with the blue laser (488 nm); it can be used in place of PerCP-Cyanine5.5. We recommend using a 710/50 bandpass filter, however, the 695/40 bandpass filter is an acceptable alternative. Please make sure that your instrument is capable of detecting this fluorochrome.

Fixation: Samples can be stored in IC Fixation Buffer (cat. 00-8222) (100 µL cell sample + 100 µL 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.

Excitation: 488 nm; Emission: 710 nm; Laser: Blue Laser.

Filtration: 0.2 µm post-manufacturing filtered.

Product Images For CD16 Monoclonal Antibody (3G8), PerCP-eFluor™ 710, eBioscience™



CD16 Antibody (46-0166-42) in Flow
Staining of normal human (left) and rhesus (right) peripheral blood cells with Mouse IgG1 K Isotype Control PerCP-eFluor® 710 (Product # 46-4714-82) (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.

1 Reference

Flow Cytometry (1)

Heliyon	Year 2021
SARS-CoV-2 infection paralyzes cytotoxic and metabolic functions of the immune cells.	
"Published figure using CD16 monoclonal antibody (Product # 46-0166-42) in Flow Cytometry"	
Authors: Singh Y,Trautwein C,Fendel R,Krickeberg N,Berezchnoy G,Bissinger R,Ossowski S,Salker MS,Casadei N, Riess O	

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