

# CD16 Monoclonal Antibody (3G8), APC-eFluor™ 780, eBioscience™

| Product Details             |  |
|-----------------------------|--|
| Size                        | 100 Tests  |
| Species Reactivity          | Baboon, Chimpanzee, Cynomolgus monkey, Human, Non-human primate, Rhesus monkey |
| Host/Isotype                | Mouse / IgG1, kappa  |
| Recommended Isotype Control | Mouse IgG1 kappa Isotype Control (P3.6.2.8.1), APC-eFluor™ 780, eBioscience™   |
| Class                       | Monoclonal   |
| Type                        | Antibody   |
| Clone                       | 3G8  |
| Conjugate                   | APC-eFluor™ 780  |
| Excitation/Emission Max     | 756/785 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_2848353   |

| 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 RIIB. 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 RIIB 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-diluted and tested by flow cytometric analysis of normal human peripheral blood cells. This may 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<sup>5</sup> to 10<sup>8</sup> cells/test.

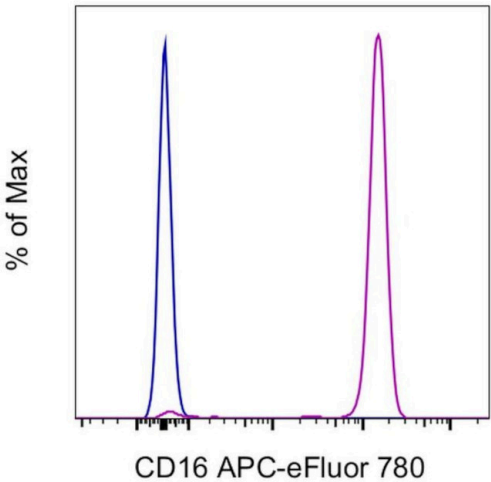
APC-eFluor 780 emits at 780 nm and is excited with the Red laser (633-647 nm). Please make sure that your instrument is capable of detecting this fluorochrome.

Light sensitivity: This tandem dye is sensitive to photo-induced oxidation. Please protect this vial and stained samples from light.

Fixation: Samples can be stored in IC Fixation Buffer (Product # 00-8222-49) (100 µL of cell sample + 100 µL of IC Fixation Buffer) or 1-step Fix/Lyse Solution (Product # 00-5333-57) 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: 633-647 nm; Emission: 780 nm; Laser: Red Laser.

Product Images For CD16 Monoclonal Antibody (3G8), APC-eFluor™ 780, eBioscience™



**CD16 Antibody (47-0166-42) in Flow**  
Normal human peripheral blood cells were stained with Mouse IgG1 kappa Isotype Control, APC-eFluor 780 (Product # 47-4714-82) (blue histogram) or CD16 Monoclonal Antibody, APC-eFluor 780 (purple histogram). Cells in the granulocyte gate were used for analysis.

1 Reference

Flow Cytometry (1)

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|--|--------------|
| Heliyon  | Year<br>2021 |
| <b>SARS-CoV-2 infection paralyzes cytotoxic and metabolic functions of the immune cells.</b>                       |              |
| "Published figure using CD16 monoclonal antibody (Product # 47-0166-42) in Flow Cytometry"                         |              |
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