

Datasheet for ABIN1303145  
**anti-CD16 antibody (PE)**



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## Overview

Quantity:	100 tests
Target:	CD16
Reactivity:	Human, Non-Human Primate
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This CD16 antibody is conjugated to PE
Application:	Flow Cytometry (FACS)

## Product Details

Immunogen:	Human neutrophils
Clone:	3G8
Isotype:	IgG1 kappa
Specificity:	The mouse monoclonal antibody 3G8 recognizes an extracellular epitope of CD16, a low affinity receptor for aggregated IgG (FcgammaRIII antigen). CD16 exists in two different isoforms: CD16a (FcgammaRIIIA, 50-65 kDa, expressed on NK-cells, monocytes and macrophages) and CD16b (FcgammaRIIIB, 48 kDa, mainly expressed on neutrophils). Regarding CD16-158V/F polymorphism, the antibody 3G8 detects both 158V and 158F allotype on natural NK cells.
Cross-Reactivity (Details):	Human, Non-Human Primates
Purification:	Purified antibody is conjugated with R-phycoerythrin (PE) under optimum conditions. Unconjugated antibody and free fluorochrome are removed by size-exclusion chromatography.

## Target Details

Target:	CD16
Alternative Name:	CD16 ( <a href="#">CD16 Products</a> )
Background:	CD16 (FcgammaRIII) is a 50-65 kDa glycoprotein serving as a low affinity IgG receptor. Human FcgammaRIII is expressed in two forms –, FcgammaRIII-A and -B. FcgammaRIII-A is a transmembrane protein of monocytes, macrophages, NK cells and a subset of T cells. It is associated with FcepsilonRI-gamma subunit and is responsible for antibody-dependent NK cell cytotoxicity. Mast cell FcgammaRIII-A is associated, moreover, with FcepsilonRI-beta subunit. Besides IgG, FcgammaRIII-A can be triggered also by oligomeric IgE. FcgammaRIII-B is a GPI-linked monomeric receptor expressed on neutrophils and is involved in their activation and induction of a proadhesive phenotype.,FcgammaRIII, IGFR3, FCRIII
Pathways:	<a href="#">Regulation of Leukocyte Mediated Immunity</a> , <a href="#">Positive Regulation of Immune Effector Process</a>

## Application Details

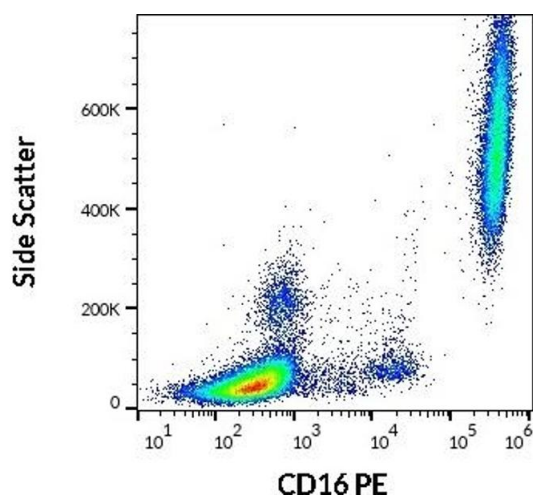
Application Notes:	Flow cytometry: The reagent is designed for analysis of human blood cells using 20 µL reagent / 100 µL of whole blood or 10 <sup>6</sup> cells in a suspension. The content of a vial (2 ml) is sufficient for 100 tests.
Comment:	The purified antibody is conjugated with R-Phycoerythrin (PE) under optimum conditions. The conjugate is purified by size-exclusion chromatography and adjusted for direct use. No reconstitution is necessary.
Restrictions:	For Research Use only

## Handling

Reconstitution:	No reconstitution is necessary.
Buffer:	Stabilizing phosphate buffered saline (PBS), pH 7.4, 15 mM sodium azide
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Handling Advice:	<b>Do not freeze.</b> Avoid prolonged exposure to light.
Storage:	4 °C
Storage Comment:	Store at 2-8°C. Protect from prolonged exposure to light. Do not freeze.

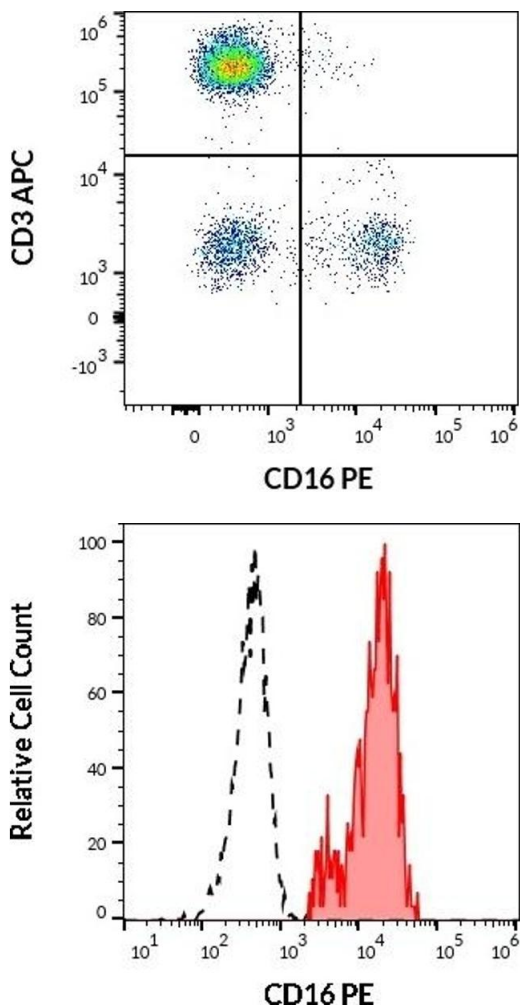
- Product cited in:
- Burt, Plitas, Zhao, Bamboat, Nguyen, Dupont, DeMatteo: "The lytic potential of human liver NK cells is restricted by their limited expression of inhibitory killer Ig-like receptors." in: **Journal of immunology (Baltimore, Md. : 1950)**, Vol. 183, Issue 3, pp. 1789-96, (2009) ([PubMed](#)).
- Choi, Wang, Peterson, Letvin, Reimann: "Use of an anti-CD16 antibody for in vivo depletion of natural killer cells in rhesus macaques." in: **Immunology**, Vol. 124, Issue 2, pp. 215-22, (2008) ([PubMed](#)).
- Congy-Jolivet, Bolzec, Ternant, Ohresser, Watier, Thibault: "Fc gamma RIIIa expression is not increased on natural killer cells expressing the Fc gamma RIIIa-158V allotype." in: **Cancer research**, Vol. 68, Issue 4, pp. 976-80, (2008) ([PubMed](#)).
- Komano, Nanki, Hayashida, Taniguchi, Miyasaka: "Identification of a human peripheral blood monocyte subset that differentiates into osteoclasts." in: **Arthritis research & therapy**, Vol. 8, Issue 5, pp. R152, (2007) ([PubMed](#)).
- Wijngaarden, van Roon, van de Winkel, Bijlsma, Lafeber: "Down-regulation of activating Fcgamma receptors on monocytes of patients with rheumatoid arthritis upon methotrexate treatment." in: **Rheumatology (Oxford, England)**, Vol. 44, Issue 6, pp. 729-34, (2005) ([PubMed](#)).
- There are more publications referencing this product on: [Product page](#)

## Images



### Flow Cytometry

**Image 1.** Flow cytometry surface staining pattern of human peripheral whole blood stained using anti-human CD16 (3G8) PE antibody (20 µL reagent / 100 µL of peripheral whole blood).



Flow Cytometry

**Image 2.** Flow cytometry multicolor surface staining pattern of human lymphocytes using anti-human CD16 (3G8) PE antibody (20  $\mu$ L reagent / 100  $\mu$ L of peripheral whole blood) and anti-human CD3 (UCHT1) APC antibody (10  $\mu$ L reagent / 100  $\mu$ L of peripheral whole blood).

Flow Cytometry

**Image 3.** Separation of human CD3 negative CD16 positive NK cells (red-filled) from human CD3 positive CD16 negative lymphocytes (black-dashed) in flow cytometry analysis (surface staining) of human peripheral whole blood stained using anti-human CD16 (3G8) PE (20  $\mu$ L reagent / 100  $\mu$ L of peripheral whole blood).