Datasheet for ABIN509571

anti-CD16 antibody

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Overview

Quantity:	0.1 mg
Target:	CD16
Reactivity:	Human, Non-Human Primate
Host:	Mouse
Clonality:	Monoclonal
Application:	Flow Cytometry (FACS), Immunoprecipitation (IP), Immunohistochemistry (Frozen Sections) (IHC (fro))

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 by protein-A affinity chromatography.
Purity:	> 95 % (by SDS-PAGE)

Target Details

Target:	CD16
Alternative Name:	CD16 (CD16 Products)
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:	Regulation of Leukocyte Mediated Immunity, Positive Regulation of Immune Effector Process

Application Details

Application Notes:	Flow cytometry: Recommended dilution: 6 µg/mL. Immunohistochemistry (frozen sections): Acetone fixation.
Restrictions:	For Research Use only

Handling

Concentration:	1 mg/mL
Buffer:	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:	**Do not freeze.**
Storage:	4 °C
Storage Comment:	Store at 2-8°C. Do not freeze.

Publications

Product cited in:	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).

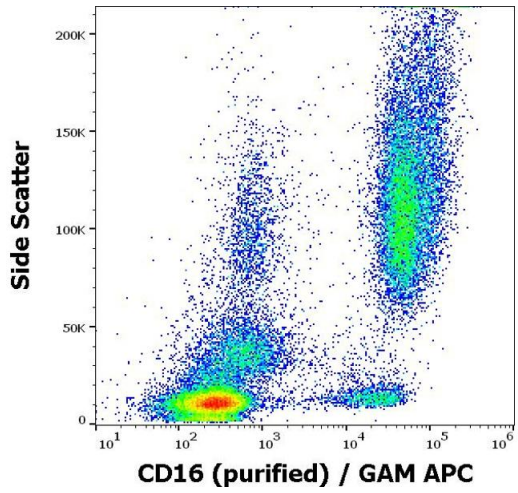
Publications

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).

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).

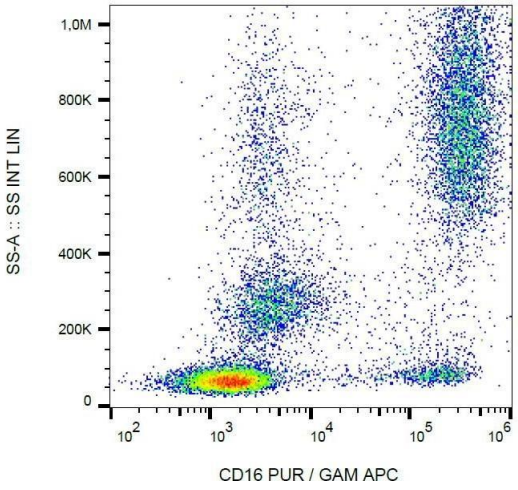
Metes, Ernst, Chambers, Sulica, Herberman, Morel: "Expression of functional CD32 molecules on human NK cells is determined by an allelic polymorphism of the FcgammaRIIC gene." in: **Blood**, Vol. 91, Issue 7, pp. 2369-80, (1998) (PubMed).

Images



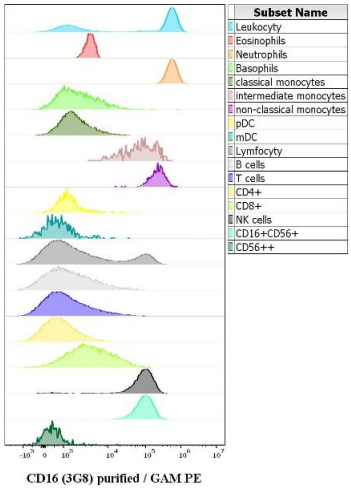
Flow Cytometry

Image 1. Flow cytometry surface staining pattern of human peripheral whole blood stained using anti-human CD16 (3G8) purified antibody (concentration in sample 2 µg/mL, GAM APC).



Flow Cytometry

Image 2. Surface staining of CD16 in human peripheral blood with anti-CD16 (3G8) purified / GAM-APC.



Flow Cytometry

Image 3. Expression profiling on peripheral blood subsets using anti-human CD16 purified antibody (clone 3G8). HCDM CDMaps standardized procedures (Kuzilkova D et al. Front Immunol. 2022,13:827898) were used for cell isolation and surface staining of blood leukocytes, with the modification of staining protocol using cytometry test tubes. Suspension of blood leukocytes isolated from buffy coats (2 x 106 cells) with residual erythrocytes lysed with 10x diluted EXCELLYSE Live solution (#ED7068) was added to the mixture of anti-human CD16 purified antibody (clone 3G8, 0.5 µg/mL in stained blood sample) and Monocyte Blocking Buffer (#ED7747), vortexed and incubated for 20 min. Next, samples were centrifuged (670 g, 5 min.), supernatant removed and secondary antibody (GAM PE) was added to sample, vortexed and incubated for 20 min. Next, samples were washed twice (2 mL PBS, 670 g, 5 min.) and then optimized backbone antibody panels (HLDA Innate and HLDA Adaptive) were added to test tubes, vortexed and incubated for 20 min. Next, samples are fixed with 2 mL of 10x diluted EXCELLYSE Easy solution (#ED7066) and incubated for 10 min. Finally, samples were centrifuged (670 g, 5 min.), supernatant removed and the cell pellet was resuspended in 200 µL of PBS for acquisition.

Please check the product details page for more images. Overall 5 images are available for ABIN509571.