Datasheet for ABIN780365

anti-FCGR1A antibody (APC)

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Overview

Quantity:	100 tests
Target:	FCGR1A
Reactivity:	Human, Non-Human Primate
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This FCGR1A antibody is conjugated to APC
Application:	Flow Cytometry (FACS)

Product Details

Immunogen:	Rheumatoid synovial fluid cells and fibronectin purified human monocytes
Clone:	10-1
Isotype:	IgG1 kappa
Specificity:	The mouse monoclonal antibody 10.1 recognizes an extracellular epitope on CD64/FcgammaRI, a 72 kDa single chain type I glycoprotein, that is expressed on monocytes/macrophages, dendritic cells, and activated granulocytes. The epitope is sensitive to formalin fixation.
Cross-Reactivity (Details):	Human, Non-Human Primates
Purification:	Purified antibody is conjugated with activated allophycocyanin (APC) under optimum conditions and unconjugated antibody and free fluorochrome are removed by size-exclusion chromatography.

Target Details

Target:	FCGR1A
Alternative Name:	CD64 (FCGR1A Products)
Background:	Fc fragment of IgG receptor Ia,CD64 (FcgammaRI) is a cell surface receptor for Fc region of IgG. It is composed of specific ligand binding alpha subunit and promiscuous gamma subunit, which is indispensable for tyrosine-based signaling. However, even the alpha subunit can transduce signals leading to cellular effector functions. The isoform FcgammaRIa1 binds human IgG with high affinity, has limited myeloid cell distribution, and a relatively large intracellular domain. Products of related genes include FcgammaRIb and FcgammaRIc isoforms, but these specify low affinity IgG receptors if functionally expressed at all. Besides a role in antigen clearance, FcgammaRI (a1) can potently enhance MHC class I and II antigen presentation in vitro and in vivo.,FcRI, IGFR1, FcgR1A
Gene ID:	2209
UniProt:	P12314
Pathways:	Regulation of Leukocyte Mediated Immunity, Positive Regulation of Immune Effector Process

Application Details

Application Notes:	Flow cytometry: The reagent is designed for analysis of human blood cells using 10 µL reagent / 100 µL of whole blood or 10^6 cells in a suspension. The content of a vial (1 ml) is sufficient for 100 tests.
Comment:	The purified antibody is conjugated with cross-linked Allophycocyanin (APC) 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:	**Do not freeze.**

Handling

	Avoid prolonged exposure to light.
Storage:	4 °C
Storage Comment:	Store at 2-8°C. Protect from prolonged exposure to light. Do not freeze.

Publications

Product cited in:

Devaraj, Davis, Simon, Jialal: "CRP promotes monocyte-endothelial cell adhesion via Fcgamma receptors in human aortic endothelial cells under static and shear flow conditions." in: **American journal of physiology. Heart and circulatory physiology**, Vol. 291, Issue 3, pp. H1170-6, (2006) (PubMed).

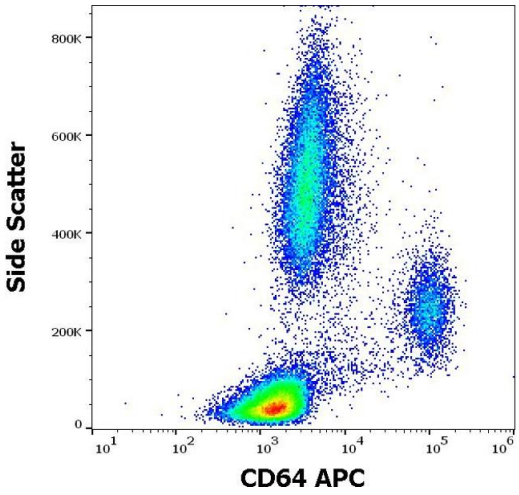
Devaraj, Du Clos, Jialal: "Binding and internalization of C-reactive protein by Fcgamma receptors on human aortic endothelial cells mediates biological effects." in: **Arteriosclerosis, thrombosis, and vascular biology**, Vol. 25, Issue 7, pp. 1359-63, (2005) (PubMed).

Roura-Mir, Wang, Cheng, Matsunaga, Dascher, Peng, Fenton, Kirschning, Moody: " Mycobacterium tuberculosis regulates CD1 antigen presentation pathways through TLR-2." in: **Journal of immunology (Baltimore, Md. : 1950)**, Vol. 175, Issue 3, pp. 1758-66, (2005) (PubMed).

Beekman, Bakema, van der Linden, Tops, Hinten, van Vugt, van de Winkel, Leusen: "Modulation of FcgammaRI (CD64) ligand binding by blocking peptides of periplakin." in: **The Journal of biological chemistry**, Vol. 279, Issue 32, pp. 33875-81, (2004) (PubMed).

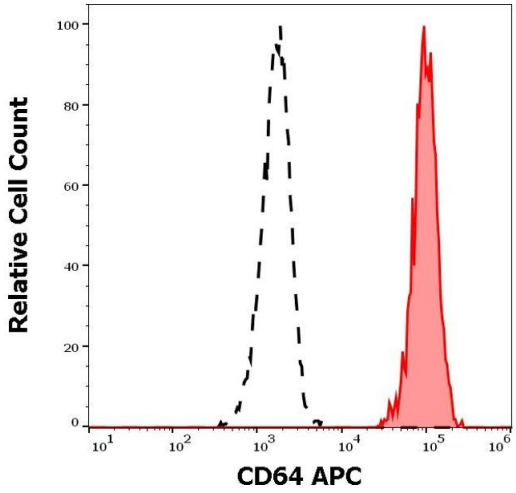
Sánchez-Torres, García-Romo, Cornejo-Cortés, Rivas-Carvalho, Sánchez-Schmitz: "CD16+ and CD16- human blood monocyte subsets differentiate in vitro to dendritic cells with different abilities to stimulate CD4+ T cells." in: **International immunology**, Vol. 13, Issue 12, pp. 1571-81, (2001) (PubMed).

There are more publications referencing this product on: Product page



Flow Cytometry

Image 1. Flow cytometry surface staining pattern of human peripheral whole blood stained using anti-human CD64 (10.1) APC antibody (10 µL reagent / 100 µL of peripheral whole blood).



Flow Cytometry

Image 2. Separation of human monocytes (red-filled) from lymphocytes (black-dashed) in flow cytometry analysis (surface staining) of human peripheral whole blood stained using anti-human CD64 (10.1) APC antibody (10 µL reagent / 100 µL of peripheral whole blood).