Datasheet for ABIN2749033

anti-FCGR1A antibody

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Overview

Quantity:	0.1 mg
Target:	FCGR1A
Reactivity:	Human, Non-Human Primate
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This FCGR1A antibody is un-conjugated
Application:	Flow Cytometry (FACS), Western Blotting (WB), Immunocytochemistry (ICC), Immunoprecipitation (IP), Immunohistochemistry (Paraffin-embedded Sections) (IHC (p)), Functional Studies (Func), Immunohistochemistry (Frozen Sections) (IHC (fro))

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

Product Details

Endotoxin Level:	Endotoxin level is less than 0.01 EU/μg of the protein, as determined by the LAL test.

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:	Functional application: Blocking of IgG binding to the FcγR1. Flow cytometry: Recommended dilution: 1-4 μg/mL. Immunohistochemistry (paraffin sections and frozen sections): There can occur problems with paraformaldehyde fixation.
Restrictions:	For Research Use only

Handling

Concentration:	1 mg/mL
Buffer:	Phosphate buffered saline (PBS), pH 7.4
Preservative:	Azide free
Storage:	4 °C
Storage Comment:	Store at 2-8°C. 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).

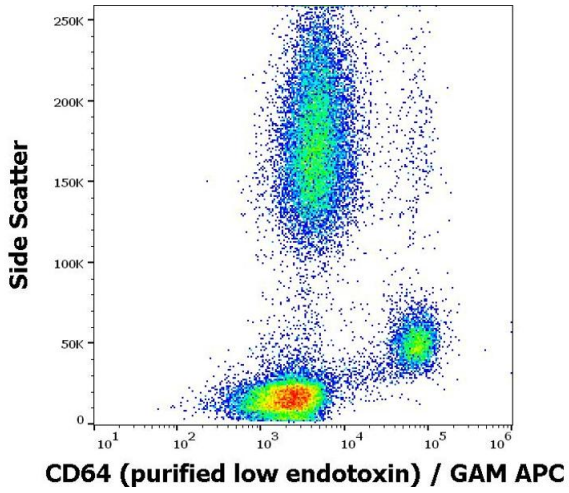
Devaraj, Du Clos, Jialal: "Binding and internalization of C-reactive protein by Fcgamma receptors on human aortic endothelial cells mediates biological effects." in: **Arteriosclerosis, thrombosis, and vascular biology**, Vol. 25, Issue 7, pp. 1359-63, (2005) (PubMed).

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).

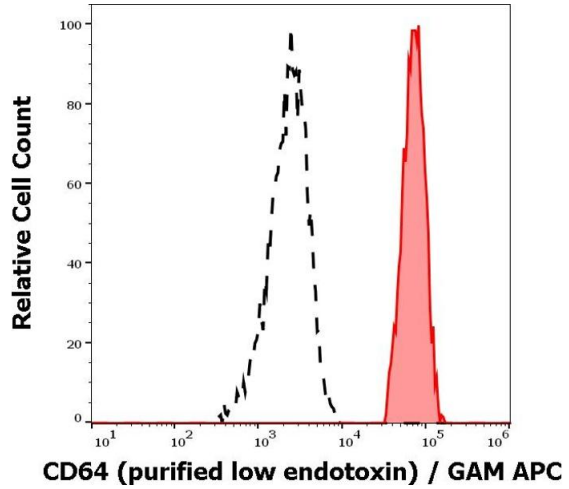
Sánchez-Torres, García-Romo, Cornejo-Cortés, Rivas-Carvalho, Sánchez-Schmitz: "CD16+ and CD16- human blood monocyte subsets differentiate in vitro to dendritic cells with different abilities to stimulate CD4+ T cells." in: **International immunology**, Vol. 13, Issue 12, pp. 1571-81, (2001) (PubMed).

There are more publications referencing this product on: Product page



Flow Cytometry

Image 1. Flow cytometry surface staining pattern of human peripheral blood stained using anti-human CD64 (10.1) purified antibody (low endotoxin, concentration in sample 4 µg/mL) GAM APC.



Flow Cytometry

Image 2. Separation of human monocytes (red-filled) from CD64 negative lymphocytes (black-dashed) in flow cytometry analysis (surface staining) of human peripheral whole blood stained using anti-human CD64 (10.1) purified antibody (low endotoxin, concentration in sample 4 µg/mL) GAM APC.