



11-644-C100

## Monoclonal Antibody to CD64 Purified Antibody (0.1 mg)

<b>Clone:</b>	10.1
<b>Isotype:</b>	Mouse IgG1
<b>Specificity:</b>	The mouse monoclonal antibody 10.1 recognizes alpha subunit of CD64/FcgammaRI, a 72 kDa single chain type I glycoprotein, that is expressed on monocytes/macrophages, dendritic cells, and activated granulocytes. HLDA III; WS Code M-250
<b>Regulatory Status:</b>	RUO
<b>Immunogen:</b>	Rheumatoid synovial fluid cells and fibronectin purified human monocytes
<b>Species Reactivity:</b>	Human, Non-Human Primates
<b>Application:</b>	Flow Cytometry Recommended dilution:5 µg/ml Immunoprecipitation Western Blotting Immunohistochemistry (paraffin sections) Application note:There can occur problems with paraformaldehyde fixation Immunohistochemistry (frozen sections) Application note:There can occur problems with paraformaldehyde fixation Immunocytochemistry Functional Application blocking of IgG binding to the FcgammaR1
<b>Purity:</b>	> 95% (by SDS-PAGE)
<b>Purification:</b>	Purified by protein-A affinity chromatography
<b>Concentration:</b>	1 mg/ml
<b>Storage Buffer:</b>	Phosphate buffered saline (PBS) with 15 mM sodium azide, approx. pH 7.4
<b>Storage / Stability:</b>	Store at 2-8°C. Do not freeze. Do not use after expiration date stamped on vial label.
<b>Expiration:</b>	See vial label
<b>Lot Number:</b>	See vial label
<b>Background:</b>	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 potentially enhance MHC class I and II antigen presentation in vitro and in vivo.

**For laboratory research only, not for drug, diagnostic or other use.**

**Antibodies****References:**

- \*Dougherty GJ, Selvendran Y, Murdoch S, Palmer DG, Hogg N: The human mononuclear phagocyte high-affinity Fc receptor, FcRI, defined by a monoclonal antibody, 10.1. *Eur J Immunol.* 1987 Oct;17(10):1453-9.
- \*Hashimoto S, Yamada M, Motoyoshi K, Akagawa KS: Enhancement of macrophage colony-stimulating factor-induced growth and differentiation of human monocytes by interleukin-10. *Blood.* 1997 Jan 1;89(1):315-21.
- \*Fadlon E, Vordermeier S, Pearson TC, Mire-Sluis AR, Dumonde DC, Phillips J, Fishlock K, Brown KA: Blood polymorphonuclear leukocytes from the majority of sickle cell patients in the crisis phase of the disease show enhanced adhesion to vascular endothelium and increased expression of CD64. *Blood.* 1998 Jan 1;91(1):266-74.
- \*Brichard B, Varis I, Latinne D, Deneys V, de Bruyere M, Leveugle P, Cornu G: Intracellular cytokine profile of cord and adult blood monocytes. *Bone Marrow Transplant.* 2001 May;27(10):1081-6.
- \*Sánchez-Torres C, García-Romo GS, Cornejo-Cortés MA, Rivas-Carvalho A, Sánchez-Schmitz G: CD16+ and CD16- human blood monocyte subsets differentiate in vitro to dendritic cells with different abilities to stimulate CD4+ T cells. *Int Immunol.* 2001 Dec;13(12):1571-81.
- \*Beekman JM, Bakema JE, van der Linden J, Tops B, Hinten M, van Vugt M, van de Winkel JG, Leusen JH: Modulation of FcγRI (CD64) ligand binding by blocking peptides of periplakin. *J Biol Chem.* 2004 Aug 6;279(32):33875-81.
- \*Roura-Mir C, Wang L, Cheng TY, Matsunaga I, Dascher CC, Peng SL, Fenton MJ, Kirschning C, Moody DB: Mycobacterium tuberculosis regulates CD1 antigen presentation pathways through TLR-2. *J Immunol.* 2005 Aug 1;175(3):1758-66.
- \*Devaraj S, Du Clos TW, Jialal I: Binding and internalization of C-reactive protein by Fcγ receptors on human aortic endothelial cells mediates biological effects. *Arterioscler Thromb Vasc Biol.* 2005 Jul;25(7):1359-63.
- \*Devaraj S, Davis B, Simon SI, Jialal I: CRP promotes monocyte-endothelial cell adhesion via Fcγ receptors in human aortic endothelial cells under static and shear flow conditions. *Am J Physiol Heart Circ Physiol.* 2006 Sep;291(3):H1170-6.
- \*Jayaram Y, Buckle AM, Hogg N: The Fc receptor, FcRI, and other activation molecules on human mononuclear phagocytes after treatment with interferon-gamma. *Clin Exp Immunol.* 1989 Mar;75(3):414-20.
- \*And many other.

Unless indicated otherwise, all products are For Research Use Only and not for diagnostic or therapeutic use. Not for resale or transfer either as a stand-alone product or as a component of another product without written consent of EXBIO. EXBIO will not be held responsible for patent infringement or other violations that may occur with the use of our products. All orders are accepted subject to EXBIO's term and conditions which are available at [www.exbio.cz](http://www.exbio.cz).

**For laboratory research only, not for drug, diagnostic or other use.**