



T9-644-T025

Monoclonal Antibody to CD64 PerCP-Cy™5.5 conjugated (25 tests)

Clone:	10.1
Isotype:	Mouse IgG1
Specificity:	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
Regulatory Status:	RUO
Immunogen:	Rheumatoid synovial fluid cells and fibronectin purified human monocytes
Species Reactivity:	Human, Non-Human Primates
Preparation:	The purified antibody is conjugated with tandem dye PerCP-Cy™5.5 under optimum conditions. The conjugate is purified by size-exclusion chromatography and adjusted for direct use. No reconstitution is necessary.
Storage Buffer:	The reagent is provided in stabilizing phosphate buffered saline (PBS) solution containing 15mM sodium azide.
Storage / Stability:	Store in the dark at 2-8°C. Do not freeze. Avoid prolonged exposure to light. Do not use after expiration date stamped on vial label.
Usage:	The reagent is designed for Flow Cytometry analysis of human blood cells using 4 µl reagent / 100 µl of whole blood or 10 ⁶ cells in a suspension. The content of a vial (0.1 ml) is sufficient for 25 tests.
Expiration:	See vial label
Lot Number:	See vial label
Background:	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.

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