

# anti-human CD64

## Monoclonal antibody 10.1 to human CD64

**Cat-No:** 21270641

100 µg in 100 µl

**Clone:** 10.1

**Specificity:** The mouse monoclonal antibody 10.1 recognizes alpha subunit of CD64/FcγRI, 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

**Isotype subclass:** Mouse IgG1 kappa

**Form:** Purified by protein G-affinity chromatography

**Purity:** > 95% (by SDS-PAGE)

**Physical state:** liquid

**Buffer/Additives/Preservative:** PBS containing 0.09 % sodium azide (pH 7.2).

**Expiration date:** The reagent is stable until the expiry date stated on the vial label.

**Storage conditions:** Store undiluted between 2 °C and 8 °C.

**Application:** Flow Cytometry, Immunohistochemistry (frozen/paraffin), Immunocytochemistry, Western Blotting

**Background:** **CD64** (FcγRI) 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 FcγRIa1 binds human IgG with high affinity, has limited myeloid cell distribution, and a relatively large intracellular domain. Products of related genes include FcγRIb and FcγRIc isoforms, but these specify low affinity IgG receptors if functionally expressed at all. Besides a role in antigen clearance, FcγRI (a1) can potently enhance MHC class I and II antigen presentation in vitro and in vivo.

### References:

- \*) 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.
- \*) 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, 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.

**Warning:** Sodium azide is harmful if swallowed (R22). Keep out of reach of children (S2). Keep away from food, drink and animal feeding stuff (S13). Wear suitable protective clothing (S36). If swallowed, seek medical advice immediately and show this container or label (S46). Contact with acids liberates very toxic gas (R32). Azide compounds should be flushed with large volumes of water during disposal to avoid deposits in lead or copper plumbing where explosive conditions can develop.

PBS containing 0.09 % sodium azide (pH 7.2).

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