

Human CD64 (FCGR1) Antibody

Purified *in vivo* GOLD™ Functional Grade

Monoclonal Antibody

Product Information

Product No.:	I-2000
Clone:	10.1
RRID:	AB_2893826
Isotype:	Mouse IgG1 κ
Storage:	Sterile 2-8°C

Product Description

Specificity:

Clone 10.1 recognizes the alpha subunit of human FCGR1.

Antigen Distribution:

FCGR1 is expressed on monocytes, macrophages, dendritic cells (DCs), and activated granulocytes.

Background:

FCGR1 antibody, 10.1, recognizes high-affinity immunoglobulin gamma Fc receptor I (FCGR1), also known as CD64. FCGR1 is a 72 kDa type I transmembrane glycoprotein expressed on monocytes, macrophages, and dendritic cells (DCs). FCGR1 can also be induced on neutrophils with IFN γ and G-CSF¹. FCGR1 binds with high affinity to monomeric IgG1 and IgG3, and to a lesser extent, IgG4², resulting in phosphorylation of the intracellular FCGR1 ITAM motif and subsequent recruitment of Syk. FCGR1 contributes to inflammation via several mechanisms, including promoting antibody-dependent cell-mediated cytotoxicity (ADCC), clearance of immune complexes, cytokine production, and antigen presentation^{1,3}. CD64-based targeted therapies eliminate M1 pro-inflammatory macrophages and show clinical potential for the treatment of macrophage-mediated chronic inflammatory diseases, such as chronic cutaneous inflammation and rheumatoid arthritis⁴. In addition, CD64 promotes antitumor responses and mediates cytotoxic killing of tumor cells by macrophages⁵.

Known Reactivity Species:

Human

Format:

Purified *in vivo* GOLD™ Functional Grade

Immunogen:

Rheumatoid synovial fluid cells and fibronectin purified human monocytes.

Formulation

This monoclonal antibody is aseptically packaged and formulated in 0.01 M phosphate buffered saline (150 mM NaCl) PBS pH 7.2 - 7.4 with no carrier protein, potassium, calcium or preservatives added. Due to inherent biochemical properties of antibodies, certain products may be prone to precipitation over time. Precipitation may be removed by aseptic centrifugation and/or filtration.

Purity

≥95% monomer by analytical SEC, >95% by SDS Page

Endotoxin

< 1.0 EU/mg as determined by the LAL method

Storage and Stability

Functional grade preclinical antibodies may be stored sterile as received at 2-8°C for up to one month. For longer term storage, aseptically aliquot in working volumes without diluting and store at ≤ -70°C.

Avoid Repeated Freeze Thaw Cycles.

Product Datasheet

www.leinco.com



Product Preparation

Functional grade preclinical antibodies are manufactured in an animal free facility using *in vitro* cell culture techniques and are purified by a multi-step process including the use of protein A or G to assure extremely low levels of endotoxins, leachable protein A or aggregates.

Applications

Applications and Recommended Usage (Quality Tested By Leinco):

FC The suggested concentration for this CD64 antibody, clone 10.1, for staining cells in flow cytometry is $\leq 1.0 \mu\text{g}$ per 10^6 cells in a volume of 100 μl or 100 μl of whole blood. Titration of the reagent is recommended for optimal performance for each application.

Other Applications Reported in Literature:

B

IHC FF

FA

Country of Origin

USA

References

1. Hulett MD & Hogarth PM. (1998) Mol Immunol. 35(14-15):989-96
2. M. Daëron., et al. (2009) Blood. 113: 3716–3725
3. Alter G., et al. (2011) Epub. 415(2):160-7
4. Barth S., et al. (2017) Biomedicines. 5(3):56
5. Keler T., et al. (1998) Clin Cancer Res. 4(9):2237-43

Products are for research use only. Not for use in diagnostic or therapeutic procedures.