

Technical Data Sheet

InVivoMAb anti-human/monkey CD64 (FCGR1A)



Attention: Use of this product constitutes an agreement to Bio X Cell's Terms and Conditions which are included with this product in print and can also be found at <https://bioxccl.com/terms-and-conditions>.

Lot Specific Information

Lot Number: Lot Specific*
Volume: Lot Specific*
Concentration: Lot Specific* (generally 4 to 11 mg/ml) *
Total Protein: Lot Specific*

*This information will be noted on the certificate of analysis that ships with this product.

Product Information

Catalog Number: BE0459
Clone: 10.1
Isotype: Mouse IgG1, κ
Recommended Isotype Control(s): InVivoMAb mouse IgG1 isotype control, unknown specificity
Recommended Dilution Buffer: InVivoPure pH 7.0 Dilution Buffer
Immunogen: Human rheumatoid synovial fluid cells and fibronectin-purified monocytes
Reported Applications: *in vivo* blocking of Fc γ RI (CD64)
in vitro blocking of Fc γ RI (CD64)
in vivo imaging
Immunoprecipitation
Flow cytometry
Immunohistochemistry (frozen)
Immunohistochemistry (paraffin)
Formulation: PBS, pH 7.0
Contains no stabilizers or preservatives
Endotoxin: ≤ 1 EU/mg (≤ 0.001 EU/ μ g)
Determined by LAL gel clotting assay
Purity: $\geq 95\%$
Determined by SDS-PAGE
Sterility: 0.2 μ m filtered
Production: Purified from cell culture supernatant in an animal-free facility
Purification: Protein G
RRID:
Molecular Weight: 150 kDa

Description

The 10.1 monoclonal antibody reacts with human Fc gamma receptor 1a (FCGR1A), also known as CD64, FcGRI, IGFR1, or Fc γ RI. This antibody exhibits cross-reactivity with several non-human primate species, including the cynomolgus monkey, rhesus monkey, baboon, and chimpanzee. CD64 is a 72 kDa type I transmembrane glycoprotein that belongs to the immunoglobulin superfamily. CD64 is expressed primarily on monocytes, macrophages, dendritic cells, and neutrophils. In experimental studies, IFN- γ stimulation has been shown to upregulate CD64 expression. CD64 serves as a high-affinity receptor that recognizes human immunoglobulins (IgGs), specifically the IgG1 and IgG3 subclasses. CD64 interacts with FCER1, FLNA, EPB41L2, LAT, PPL, HCK, LYN, and IGHG1. CD64 operates in both innate and adaptive immune responses, facilitating cellular processes such as endocytosis, phagocytosis, antigen presentation, antibody-dependent cellular cytotoxicity (ADCC), cytokine secretion, and superoxide production. CD64 is crucial for neutrophil recruitment in acute infectious illnesses; on monocytes, it facilitates IgG effector activities, therefore initiating ADCC in virus-infected cells. CD64 is implicated in various chronic autoimmune disorders, including systemic lupus erythematosus (SLE), rheumatoid arthritis (RA), atopic dermatitis (eczema), and diabetic wound healing. Recent experimental studies suggest upregulation of

CD64 expression on neutrophils is an early diagnostic biomarker for infections. CD64 is an emerging as a compelling immunotherapeutic target for chronic inflammatory disorders.

Storage

Store at the stock concentration at 4°C . **Do not freeze.**

It is not uncommon for a floccule or precipitate to appear during storage. The floccule is typically buffer salts precipitating out of solution or a small bit of protein aggregation. For information on how to remove floccules or precipitates see our FAQ's at <https://bioxcell.com/faqs>.

Protocol Information

Since applications vary, each investigator should use the application references as a guide to help estimate the appropriate dose or concentration. The dose or concentration can be further optimized experimentally in a dose response or titration experiment.

Application References

For a complete list of references, visit https://bioxcell.com/be0459?bxcs=9k1b3a#tab_references or scan the QR code below.



Bio X Cell, LLC

<https://bioxcell.com>

+1-866-787-3444

customerservice@bioxcell.com

Conditions: For research use only. Not for use in diagnostic or therapeutic procedures.

Not for resale.

Bio X Cell, Bio X Cell logo, and all other trademarks are the property of Bio X Cell, LLC © 2025 Bio X Cell, LLC