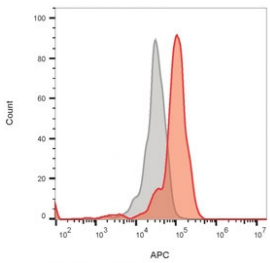
CD64 Antibody / High-Affinity Fc Gamma Receptor [clone 10.1] (V7768)

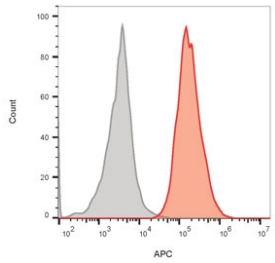
Catalog No.	Formulation	Size
V7768-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V7768-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V7768SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

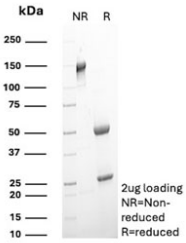
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	10.1
Purity	Protein G affinity chromatography
UniProt	P12314
Applications	Flow Cytometry : 1-2ug/million cells
Limitations	This CD64 Antibody / High-Affinity Fc Gamma Receptor is available for research use only.



CD64 Antibody PBMC FACS. Flow cytometry analysis of monocyte-gated human peripheral blood mononuclear cells stained with CD64 Antibody / High-Affinity Fc Gamma Receptor clone 10.1. A distinct rightward fluorescence shift is observed relative to the isotype control, consistent with strong surface expression of FCGR1A / CD64 on monocyte populations involved in Fc-mediated innate immune signaling and antibody-dependent cellular responses.



CD64 Antibody U937 FACS. Flow cytometry analysis of human U937 monocytic cells stained with CD64 Antibody / High-Affinity Fc Gamma Receptor clone 10.1. A pronounced rightward fluorescence shift is observed relative to the isotype control, consistent with strong cell surface expression of FCGR1A / CD64, a high-affinity IgG receptor associated with monocyte and macrophage immune activation pathways.



SDS-PAGE analysis of purified, BSA-free CD64 antibody (clone 10.1) as confirmation of integrity and purity.

Description

Fc gamma receptor 1A (FCGR1A), commonly known as CD64, is a high-affinity immunoglobulin gamma Fc receptor encoded by the FCGR1A gene and expressed primarily on monocytes, macrophages, activated neutrophils, and antigen-presenting immune cells. CD64 Antibody / High-Affinity Fc Gamma Receptor is useful for studying innate immune signaling, Fc receptor biology, phagocytosis, inflammatory activation, and leukocyte immunophenotyping. CD64 belongs to the Fc gamma receptor family responsible for binding IgG antibodies and mediating antibody-dependent immune responses.

CD64 antibody, also referred to as FCGR1A antibody, Fc gamma receptor 1A antibody, or Fc gamma RI antibody in the literature, recognizes a transmembrane receptor with exceptionally high affinity for monomeric IgG. Following ligand engagement, CD64 participates in signaling pathways regulating phagocytosis, antigen presentation, cytokine release, respiratory burst activation, and antibody-dependent cellular cytotoxicity. The receptor plays an important role in host defense against bacterial and viral pathogens and contributes to inflammatory responses within both innate and adaptive immune systems.

CD64 expression is particularly enriched in monocyte and macrophage populations and may increase substantially during inflammatory activation, infection, or interferon gamma stimulation. Because of its strong expression on activated myeloid cells, CD64 is widely used as a marker in flow cytometry, immunophenotyping, sepsis research, leukemia characterization, and inflammatory disease studies. Elevated CD64 expression has additionally been associated with autoimmune disease, chronic inflammation, and tumor-associated immune microenvironment regulation.

FCGR1A functions together with Fc receptor signaling adaptors including FcR gamma chain-containing complexes that activate downstream tyrosine kinase signaling pathways involved in immune cell activation and cytoskeletal remodeling. The receptor contributes to immune complex clearance, antibody-mediated pathogen recognition, and inflammatory signaling responses in activated leukocytes. Due to its broad immunologic importance, CD64 remains a highly utilized target in immunology and translational immune monitoring research.

CD64 is encoded on human chromosome 1q21 and produces a type I transmembrane glycoprotein containing extracellular immunoglobulin-like domains involved in IgG binding. The receptor localizes primarily to the plasma membrane of myeloid lineage cells and participates in Fc-mediated immune activation pathways. Immunophenotyping studies commonly demonstrate strong surface expression in monocyte and macrophage populations within peripheral blood mononuclear cells.

This mouse monoclonal CD64 antibody clone 10.1 has been widely utilized in published immunology research and is

supported by more than 700 scientific publications. Flow cytometry analysis of peripheral blood mononuclear cells further supports selective surface detection of endogenous CD64-positive immune cell populations consistent with known FCGR1A expression patterns in activated myeloid cells.

Explore the broader CD Antibodies page for additional antibodies targeting leukocyte differentiation markers, immune receptors, and cell surface proteins involved in innate and adaptive immune signaling pathways.

Application Notes

Optimal dilution of the CD64 Antibody / High-Affinity Fc Gamma Receptor should be determined by the researcher.

Immunogen

Rheumatoid synovial fluid cells and human monocytes were used as the immunogen for the CD64 antibody.

Storage

Store the CD64 antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

FCGR1A antibody, Fc gamma receptor 1A antibody, Fc gamma RI antibody, CD64 monocyte marker antibody, High-affinity IgG receptor antibody

Copyright © NSJ Bioreagents. All rights reserved.