Mouse Anti-Rat CD64 Monoclonal Antibody

Cat. No. CAB11539MR **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Mouse Monoclonal Antibody to Rat CD64
Species	Rat
Source	Mouse
Antigen Description	Rat High affinity immunoglobulin gamma Fc receptor I, also known as FCGR1 and CD64, is an integral membrane glycoprotein and a member of the immunoglobulin superfamily. CD64 is a high affinity receptor for the Fc region of IgG gamma and functions in both innate and adaptive immune responses. Receptors that recognize the Fc portion of IgG function in the regulation of immune response and are divided into three classes designated CD64, CD32, and CD16. CD64 is structurally composed of a signal peptide that allows its transport to the surface of a cell, three extracellular immunoglobulin domains of the C2-type that it uses to bind antibody, a hydrophobic transmembrane domain, and a short cytoplasmic tail. CD64 is constitutively found on only macrophages and monocytes, but treatment of polymorphonuclear leukocytes with cytokines like IFNγ and G-CSF can induce CD64 expression on these cells. The inactivation of the mouse CD64 resulted in a wide range of defects in antibody Fc-dependent functions. Mouse CD64 is an early participant in Fc-dependent cell activation and in the development of immune responses.
Specificity	Rat CD64 / FCGR1A. No cross-reactivity with human cell lysate (293 cell line) in ELISA.

Tel: 1-631-559-9269 1-516-512-3133
Email: info@creative-biomart.com Fax: 1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA

Immunogen	Recombinant Rat CD64 / FCGR1A Protein
Isotype	Mouse IgG1
Clone	5C2I7
Applications	WB; ELISA
Dilution	Western blot: This antibody can be used at 1-2 μg/mL with the appropriate secondary reagents to detect Rat FCGR3A in WB. Using a DAB detection system, the detection limit for Rat FCGR3A is approximately 100 ng/lane under non-reducing conditions and 8 ng/lane under reducing conditions.ELISA: This antibody can be used at 0.5-1 μg/mL with the appropriate secondary reagents to detect Rat FCGR3A. The detection limit for Rat FCGR3A is approximately 0.31 ng/well.
Preparation	This antibody was produced from a hybridoma resulting from the fusion of a mouse myeloma with B cells obtained from a mouse immunized with purified, human cell-derived, recombinant Rat CD64 / FCGR1A.The IgG fraction of the cell culture supernatant was purified by Protein A affinity chromatography.
Format	0.2 μm filtered solution in PBS with 5% trehalose
Storage	This antibody can be stored at 2-8 °C for one month without detectable loss of activity. Antibody products are stable for twelve months from date of receipt when stored at -20 to -70 °C. Preservative-Free.Sodium azide is recommended to avoid contamination (final concentration 0.05%-0.1%). It is toxic to cells and should be disposed of properly. Avoid repeated freeze-thaw cycles.

GENE INFORMATION

Gene Name	Fcgr1a Fc fragment of IgG, high affinity Ia, receptor (CD64) [Rattus norvegicus]

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Official Symbol	Fcgr1a
Synonyms	FCGR1A; Fc fragment of IgG, high affinity Ia, receptor (CD64); high affinity immunoglobulin gamma Fc receptor I; Fc receptor, IgG, high affinity I; high affinity IgG Fc receptor, subunit beta; Fc fragment of IgG high affinity Ib receptor; high-affinity immunoglobulin gamma Fc receptor I; Fc fragment of IgG, high affinity Ib, receptor for (CD64); Fcgr1; Fcgr1b; FcgammaRI;
Gene ID	295279
mRNA Refseq	NM_001100836
Protein Refseq	NP_001094306
Pathway	Fc gamma R-mediated phagocytosis, organism-specific biosystem; Fc gamma R-mediated phagocytosis, conserved biosystem; Hematopoietic cell lineage, organism-specific biosystem; Hematopoietic cell lineage, conserved biosystem; Leishmaniasis, organism-specific biosystem; Leishmaniasis, conserved biosystem; Osteoclast differentiation, organism-specific biosystem;
Function	IgG binding; IgG receptor activity;

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