

## Mouse Anti-Rat CD16a Monoclonal Antibody

**Cat. No.** CAB11540RM    **Lot. No.** (See product label)

### SPECIFICATION

**Product Overview**      Mouse Monoclonal Antibody to Rat CD64 / FCGR1A Protein

**Species**                      Rat

**Source**                        Mouse

#### Antigen Description

Rat low affinity immunoglobulin gamma Fc region receptor III, also known as IgG Fc receptor III, Fc-gamma RIII, FcRIII, CD16 and FCGR3, is a single-pass type I membrane protein which contains two Ig-like C2-type (immunoglobulin-like) domains. CD16 / FCGR3 is expressed on natural killer cells, macrophages, subpopulation of T-cells, immature thymocytes and placental trophoblasts. Cynomolgus CD16 / FCGR3 is a receptor for the Fc region of complexed immunoglobulins gamma. It is a low affinity receptor. Cynomolgus CD16 / FCGR3 binds IgG1 and IgG2. Cynomolgus CD16 / FCGR3 exists as a heterooligomeric receptor complex with Fc epsilon receptor I gamma subunit and / or the CD3 zeta subunit. It also interacts with INPP5D / SHIP1. An Fc receptor is a protein found on the surface of certain cells ( natural killer cells, macrophages, neutrophils, and mast cells ) that contribute to the protective functions of the immune system. Fc receptors bind to antibodies that are attached to infected cells or invading pathogens. Their activity stimulates phagocytic or cytotoxic cells to destroy microbes, or infected cells by antibody-mediated phagocytosis or antibody-dependent cell-mediated cytotoxicity. There are several different types of Fc receptors, which are classified based on the type of antibody that they recognize. Those that bind the most common class of antibody, IgG, are called Fc-gamma receptors (FcyR), those that bind IgA are called Fc-alpha receptors (FcaR) and those

 Tel: 1-631-559-9269    1-516-512-3133

 Email: [info@creative-biomart.com](mailto:info@creative-biomart.com)     Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

that bind IgE are called Fc-epsilon receptors (FcεR). All Fc-gamma receptors belong to the immunoglobulin superfamily and are the most important Fc receptors. This family includes several members, FcγRI (CD64), FcγRIIA (CD32), FcγRIIB (CD32), FcγRIIIA (CD16a), FcγRIIIB (CD16b), which differ in their antibody affinities due to their different molecular structure.

**Specificity** Rat CD16a / FCGR3A. No cross-reactivity with human cell lysate ( 293 cell line ) in ELISA.

**Immunogen** Recombinant Rat CD16a / FCGR3A Protein

**Isotype** Mouse IgG2b

**Clone** 7E5I9

**Applications** WB; ELISA

**Dilution** Western blot: This antibody can be used at 1-2 µg/mL with the appropriate secondary reagents to detect Rat FCGR1A in WB. Using a DAB detection system, the detection limit for Rat FCGR1A is approximately 2 ng/lane under non-reducing conditions and reducing conditions. ELISA: This antibody can be used at 0.5-1 µg/mL with the appropriate secondary reagents to detect Rat FCGR1A. The detection limit for Rat FCGR1A is approximately 0.16 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 CD16a / FCGR3A. 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

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**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**

<b>Gene Name</b>	Fcgr3a Fc receptor, IgG, low affinity III [ Rattus norvegicus ]
<b>Official Symbol</b>	Fcgr3a
<b>Synonyms</b>	Fcgr3a; Fc receptor, IgG, low affinity III;
<b>Gene ID</b>	29490

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