

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse Fcγ RI/CD64 in direct ELISAs and Western blots. In direct ELISAs, no cross-reactivity with recombinant human (rh) Fcγ RIIA or rhFcγ RIIB is observed.
Source	Monoclonal Rat IgG _{2B} Clone # 290305
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	NS0-derived recombinant mouse Fcγ RI/CD64 extracellular domain Glu25-Pro297 Accession # P26151
Conjugate	Alexa Fluor 700 Excitation Wavelength: 675-700 nm Emission Wavelength: 723 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

Western Blot Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

Receptors for the Fc region of IgG (Fcγ Rs) are members of the Ig superfamily that function in the activation or inhibition of immune responses such as degranulation, phagocytosis, ADCC (antibody-dependent cellular toxicity), cytokine release, and B cell proliferation (1-3). The Fcγ Rs have been divided into three classes based on close relationships in their extracellular domains; these groups are designated Fcγ RI (also known as CD64), Fcγ RII (CD32), and Fcγ RIII (CD16). Each group may be encoded by multiple genes and exist in different isoforms depending on species and cell type. The CD64 proteins are high affinity receptors (~10⁻⁸-10⁻⁹ M) capable of binding monomeric IgG, whereas the CD16 and CD32 proteins bind IgG with lower affinities (~10⁻⁶-10⁻⁷ M) only recognizing IgG aggregates surrounding multivalent antigens (1, 4). Fcγ Rs that deliver an activating signal either have an intrinsic immunoreceptor tyrosine-based activation motif (ITAM) within their cytoplasmic domains or associate with one of the ITAM-bearing adapter subunits, Fcγ Rγ or ζ (3, 5). The only inhibitory member in human and mouse, Fcγ RIIB, has an intrinsic cytoplasmic immunoreceptor tyrosine-based inhibitory motif (ITIM). The coordinated functioning of activating and inhibitory receptors is necessary for successful initiation, amplification, and termination of immune responses (5). Mouse Fcγ RI is transmembrane protein with three extracellular Ig-like domains, and it delivers an activating signal via the associated Fcγ Rγ accessory chain (1, 2). The high affinity recognition of IgG by Fcγ RI permits the triggering of effector responses at low IgG concentrations typical of early immune responses (2). Fcγ RI is expressed constitutively on monocytes and macrophages and can be induced on neutrophils and eosinophils (1, 4). Its expression is up-regulated during bacterial infections and sepsis.

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