Mouse Fcγ RI/CD64
Alexa Fluor® 350-conjugated Antibody

Monoclonal Rat IgG_{2A} Clone # 290322

Catalog Number: FAB20741U

100 µg

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse Fcγ RI in direct ELISAs and Western blots. In Western blots, no cross-reactivity with recombinant human (rh) Fcγ RIA, rhFcγ RIIB, or rhFcγ RIIIB is observed.
Source	Monoclonal Rat IgG_{2A} Clone # 290322
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	NS0-derived recombinant mouse Fcγ RI extracellular domain Glu25-Pro297 Accession # P26151
Conjugate	Alexa Fluor 350 Excitation Wavelength: 346 nm Emission Wavelength: 442 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *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.*

	Recommended Concentration	Sample
Flow Cytometry	0.25-1 µg/10^6 cells	RAW 264.7 mouse monocyte/macrophage cell line

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 (Fc γ 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 Fc γ Rs have been divided into three classes based on close relationships in their extracellular domains; these groups are designated Fc γ RI (also known as CD64), Fc γ RII (CD32), and Fc γ 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). Fc γ 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, Fc Rγ or ζ (3, 5). The only inhibitory member in human and mouse, Fc γ 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 Fc γ RI is transmembrane protein with three extracellular Ig-like domains, and it delivers an activating signal via the associated Fc Rγ accessory chain (1, 2). The high affinity recognition of IgG by Fc γ RI permits the triggering of effector responses at low IgG concentrations typical of early immune responses (2). Fc γ 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.

References:

1. Van de Winkel, J. and P. Capes (1993) Immunol. Today **14**:215.
2. Raghaven, M. and P. Bjorkman (1996) Annu. Rev. Cell Dev. Biol. **12**:181.
3. Ravetch, J. and S. Bolland (2001) Annu. Rev. Immunol. **19**:275.
4. Takai, T. (2002) Nature Rev. Immunol. **2**:580.
5. Ravetch, J. and L. Lanier (2000) Science **290**:84.

PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc, and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.

bio-techne®
Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 Canada TEL 855 668 8722 China TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449