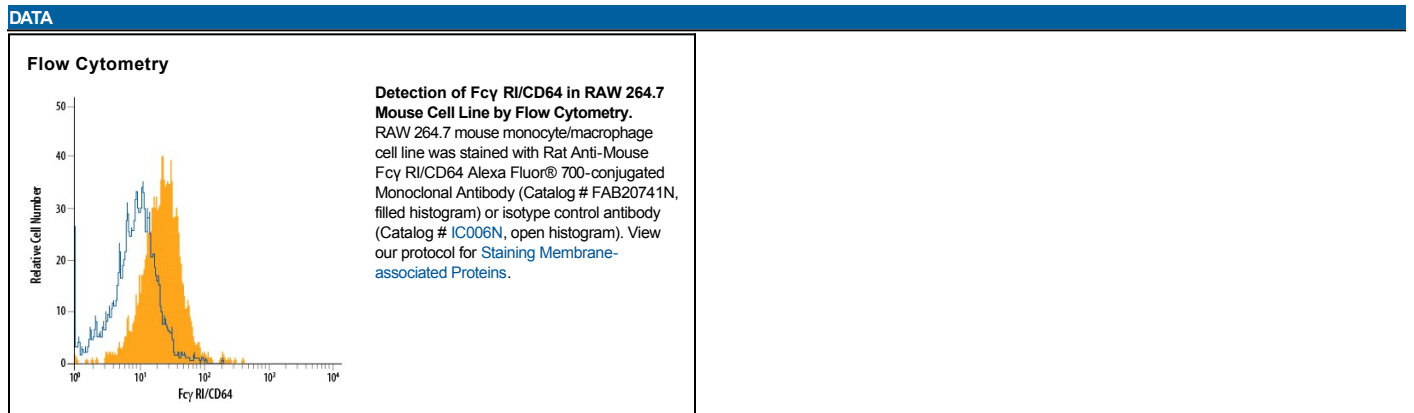


DESCRIPTION	
Species Reactivity	Mouse
Specificity	Detects mouse Fcγ RI in direct ELISAs and Western blots. In Western blots, no cross-reactivity with recombinant human (rh) Fcγ RIA, rhFcγ RIIB, or rhFcγ RIIB is observed.
Source	Monoclonal Rat IgG _{2A} Clone # 290322
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	NS0-derived recombinant mouse Fcγ RI extracellular domain Glu25-Pro297 Accession # P26151
Conjugate	Alexa Fluor 700 Excitation Wavelength: 675-700 nm Emission Wavelength: 723 nm
Formulation	Supplied 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. <i>General Protocols</i> are available in the <i>Technical Information</i> section on our website.		
	Recommended Concentration	Sample
Flow Cytometry	5 μL/10 ⁶ cells	See Below



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 ($\sim 10^{-8}$ - 10^{-9} M) capable of binding monomeric IgG, whereas the CD16 and CD32 proteins bind IgG with lower affinities ($\sim 10^{-6}$ - 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 R γ 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 R γ 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:

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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.

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