

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Fcγ RII/CD32 in direct ELISAs and Western blots.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Fcγ RII/CD32 Ala46-Pro217 Accession # P31994
Conjugate	Alexa Fluor 750 Excitation Wavelength: 749 nm Emission Wavelength: 775 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RFD1 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

<i>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.</i>	
CyTOF-ready	Optimal dilution of this antibody should be experimentally determined.
Western Blot	Optimal dilution of this antibody should be experimentally determined.
Blockade of Receptor-ligand Interaction	Optimal dilution of this antibody should be experimentally determined.
Flow Cytometry	Optimal dilution of this antibody should be experimentally determined.
Immunocytochemistry	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 (FcγRs) 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 FcγRs have been divided into three classes based on close relationships in their extracellular domains; these groups are designated FcγRI (also known as CD64), FcγRII (CD32), and FcγRIII (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). FcγRs 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, FcRγ or ζ (3, 5). The only inhibitory member in human and mouse, FcγRIIB, 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).

Three distinct genes encode the human CD32 group, and the protein products are designated FcγRIIA, B, and C (1). These receptors are glycoproteins of approximately 40 kDa having two extracellular Ig-like domains. The FcγRII proteins share 94-99% amino acid identity in their extracellular domains but differ substantially in their transmembrane and cytoplasmic domains. FcγRIIA associates with FcRγ, and delivers an activating signal upon ligand binding (3, 5). In contrast, FcγRIIB delivers an inhibitory signal. FcγRIIC represents an unequal cross-over event between the IIA and IIB genes. Its extracellular domain shares 99% amino acid identity with FcγRIIB, but a portion of the cytoplasmic domain is closely related to FcγRIIA. FcγRII proteins are expressed on cells of both myeloid and lymphoid lineages as well as on cells of non-hematopoietic origin.

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