# Human Fcγ RII/CD32 Biotinylated Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: BAF1330

## DESCRIPTION

| | |
|---|---|
| **Species Reactivity** | Human |
| **Specificity** | Detects human Fcγ RII/CD32 in Western blots. In Western blots, approximately 20% cross-reactivity with recombinant mouse CD32 is observed. |
| **Source** | Polyclonal Goat IgG |
| **Purification** | Antigen Affinity-purified |
| **Immunogen** | Mouse myeloma cell line NS0-derived recombinant human Fcγ RIIB<br>Ala46-Pro217<br>Accession # P31994 |
| **Formulation** | Lyophilized from a 0.2 μm filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details. |

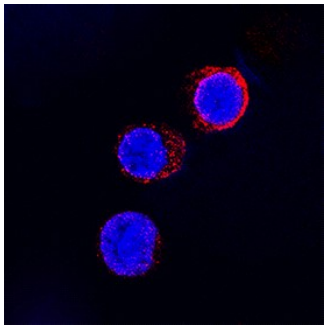
## APPLICATIONS

**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 |
|---|---|---|
| **Western Blot** | 0.1 µg/mL | Recombinant Human Fcγ RIIB/C (CD32b/c) (Catalog # 1875-CD) |
| **Immunocytochemistry** | 5-15 µg/mL | See Below |

## DATA

**Immunocytochemistry**



**Fcγ RII/CD32 in Human PBMCs.** Fcγ RII/CD32 was detected in immersion fixed human peripheral blood mononuclear cells (PBMCs) stimulated with calcium ionomycin and PMA using Goat Anti-Human Fcγ RII/CD32 Biotinylated Antigen Affinity-purified Polyclonal Antibody (Catalog # BAF1330) at 15 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Streptavidin (red; Catalog # NL999) and counterstained with DAPI (blue). Specific staining was localized to the cell surface and cytoplasm. View our protocol for Fluorescent ICC Staining of Non-adherent Cells.

## PREPARATION AND STORAGE

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|---|---|
| **Reconstitution** | Reconstitute at 0.2 mg/mL in sterile PBS. |
| **Shipping** | The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. |
| **Stability & Storage** | **Use a manual defrost freezer and avoid repeated freeze-thaw cycles.**<br>● 12 months from date of receipt, -20 to -70 °C as supplied.<br>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.<br>● 6 months, -20 to -70 °C under sterile conditions after reconstitution. |



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## 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, FcRγ 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).

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

**References:**


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5. Ravetch, J. and L. Lanier (2000) Science **290**:84.




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