**DESCRIPTION**

**Species Reactivity**  
Human

**Specificity**  
Detects human FcγRII/CD32 in direct ELISAs and Western blots. In direct ELISAs, approximately 20% cross-reactivity with recombinant human (rh) FcγRIIA is observed, and approximately 10% cross-reactivity with recombinant mouse FcγRIIB is observed, and less than 1% cross-reactivity with rhFcγRIIIA is observed.

**Source**  
Polyclonal Goat IgG

**Purification**  
Antigen Affinity-purified

**Immunogen**  
Mouse myeloma cell line NS0-derived recombinant human FcγRII/CD32 Ala46-Pro217  
Accession # P31994

**Endotoxin Level**  
<0.10 EU per 1 μg of the antibody by the LAL method.

**Formulation**  
Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

*Small pack size (-SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.

**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.

<table>
<thead>
<tr>
<th>Recommended Concentration</th>
<th>Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Western Blot</td>
<td>0.1 μg/mL</td>
</tr>
<tr>
<td>Flow Cytometry</td>
<td>2.5 μg/10⁶ cells</td>
</tr>
<tr>
<td>Immunocytochemistry</td>
<td>5-15 μg/mL</td>
</tr>
<tr>
<td>CyTOF-ready</td>
<td>Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.</td>
</tr>
</tbody>
</table>

**Blockade of Receptor-ligand Interaction**  
In a functional ELISA, 2-6 μg/mL of this antibody will block 50% of the binding of 2 μg/mL of human IgG to immobilized Recombinant Human FcγRIIIA (CD32b/c) (Catalog # 1875-CD) coated at 2 μg/mL (100 μL/well). At 100 μg/mL, this antibody will block >90% of the binding.

**DATA**

**Immunocytochemistry**  
FcγRII/CD32 in Human PBMCs.  
FcγRII/CD32 was detected in immersion fixed human peripheral blood mononuclear cells (PBMCs) using Goat Anti-Human FcγRII/CD32 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1330) at 15 μg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Goat IgG Secondary Antibody (red; Catalog # NL001) and counterstained with DAPI (blue). Specific staining was localized to cytoplasmic. View our protocol for Fluorescent ICC Staining of Non-adherent Cells.

**PREPARATION AND STORAGE**

**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.  
*Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C.

**Stability & Storage**  
Use a manual defrost freezer and avoid repeated freeze-thaw cycles.  
- 12 months from date of receipt, -20 to -70 °C as supplied.  
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.  
- 6 months, -20 to -70 °C under sterile conditions after reconstitution.
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 (~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). 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, FcγRγ 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 FcγRγ, 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.

References: