**DESCRIPTION**

**Source**
Mouse myeloma cell line, NS0-derived
Glu25-Pro297, with a C-terminal 6-His tag
Accession # P26151

**N-terminal Sequence Analysis**
Glu25

**Predicted Molecular Mass**
31.2 kDa

**SPECIFICATIONS**

**SDS-PAGE**
50-60 kDa, reducing conditions

**Activity**
Measured by its ability to bind mouse IgG with an estimated $K_d < 0.5$ nM.

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

**Purity**
>95%, by SDS-PAGE under reducing conditions and visualized by silver stain.

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

**PREPARATION AND STORAGE**

**Reconstitution**
Reconstitute at 100 µg/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.
- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 3 months, -20 to -70 °C under sterile conditions after reconstitution.

**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 ($\sim 10^{-8}$ to $10^{-9}$ M) capable of binding monomeric IgG, whereas the CD16 and CD32 proteins bind IgG with lower affinities ($\sim 10^{-6}$ to $10^{-7}$ 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, FcγRIIa and FcγRIIb.

Mouse FcγRI is a transmembrane protein with three extracellular Ig-like domains, and it delivers an activating signal via the associated FcγRIIa accessory chain (1, 2). The high affinity recognition of IgG by FcγRI permits the triggering of effector responses at low IgG concentrations typical of early immune responses (2). FcγRI 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:**