

**DESCRIPTION**

**Source** Mouse myeloma cell line, NS0-derived  
Gly17-Gln208, with a C-terminal 6-His tag  
Accession # AAH17865

**N-terminal Sequence Analysis** Gly17

**Predicted Molecular Mass** 22.6 kDa

**SPECIFICATIONS**

**SDS-PAGE** 40-50 kDa, reducing conditions

**Activity** Measured by its ability to bind human IgG with an estimated  $K_d < 50$  nM.

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

**Purity** >90%, 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**

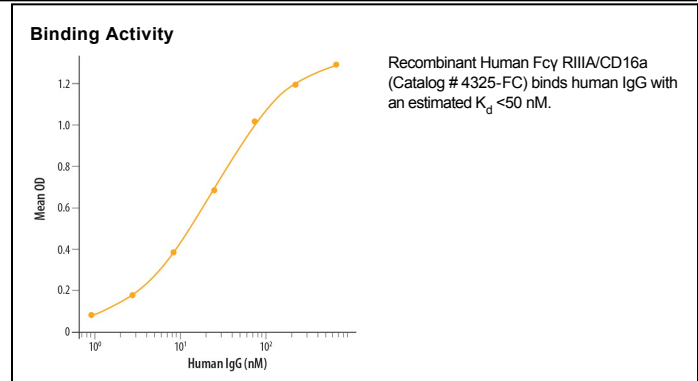
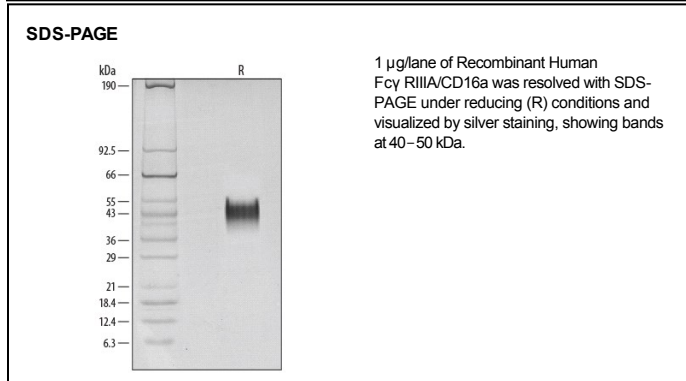
**Reconstitution** Reconstitute at 100 µg/mL in sterile PBS.

**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.

**DATA**



**BACKGROUND**

Fcγ RIIIA is a low/intermediate affinity receptor for polyvalent immune-complexed IgG. It is involved in phagocytosis, secretion of enzymes and inflammatory mediators, antibody-dependent cytotoxicity and clearance of immune complexes (1, 2). In humans, it is a 50-70 kDa type I transmembrane activating receptor expressed by NK cells, T cells, monocytes, and macrophages (1). Fcγ RIIIB is highly related, sharing 97% amino acid (aa) identity within the extracellular domain (ECD), but is a GPI-linked receptor expressed on human neutrophils and eosinophils (1, 2). The ECD of Fcγ RIIIA shares 63%, 61%, 65%, 59% and 58% aa identity with mouse Fcγ RIV, rat Fcγ RIIIA, feline CD16, bovine CD16 and porcine Fcγ RIIIB paralogs, respectively. The Fcγ RIIIA cDNA encodes 254 aa including a 16 aa signal sequence, 191 aa ECD with two C2-type Ig-like domains and five potential N-glycosylation sites, a 22 aa transmembrane (TM) sequence and a 25 aa cytoplasmic domain. In humans, a single nucleotide polymorphism creates high binding (176V) and low binding (176F) forms that, when homozygous, may influence susceptibility to autoimmune diseases or response to therapeutic IgG antibodies (3, 4). Catalog # 4325-FC is expressed as the 176V isoform of Fcγ RIIIA. Fcγ RIIIA surface expression requires interaction of an accessory chain, either the common γ-chain or CD3ζ (5, 6). Glycosylation patterns, electrophoretic mobility and binding affinity appear to differ between NK cell and monocyte Fcγ RIIIA (7). The ECD of both Fcγ RIIIA and b can be proteolytically cleaved and retain binding activity in soluble form (8-11). In monocytes and macrophages, activation and phagocytosis can trigger Fcγ RIIIA release (11). Soluble Fcγ RIII can be detected in normal plasma and is increased in rheumatoid arthritis and in coronary artery diseases (9, 10).

**References:**

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