

DESCRIPTION

Source Mouse myeloma cell line, NS0-derived
Gly21-Pro200, with a C-terminal 6-His tag
Accession # NP_997486

N-terminal Sequence Analysis Ala20 and Gly21

Predicted Molecular Mass 21 kDa

SPECIFICATIONS

SDS-PAGE 24-36 kDa, reducing conditions

Activity Measured by its binding ability in a functional ELISA.
When Rat IgG is immobilized at 2 µg/mL, 100 µL/well, the concentration of Recombinant Rat Fcγ RIIIA/CD16a that produces 50% of the optimal binding response is 0.1-0.6 µg/mL.

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

Purity >95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.

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

PREPARATION AND STORAGE

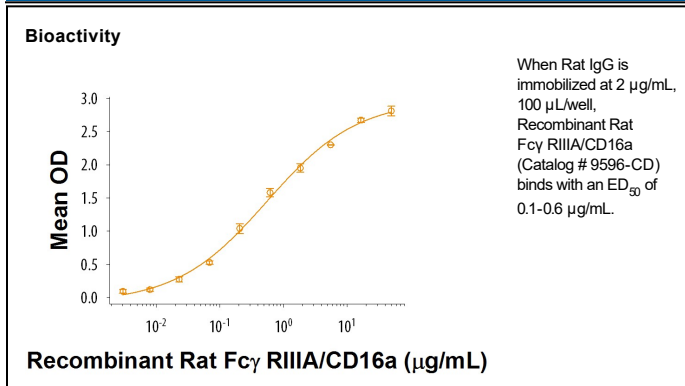
Reconstitution Reconstitute at 100 µg/mL in PBS.

Shipping The product is shipped with polar packs. 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

Receptors for the Fc region of IgG (Fcγ Rs) are members of the Ig superfamily that function in the activation or inhibition of immune responses such as degranulation, phagocytosis, cytokine release, and B cell proliferation. There are three classes of Fcγ Rs, based on close relationships in their extracellular domains: Fcγ RI/CD64, Fcγ RII/CD32, and Fcγ RIII/CD16. Each group may be encoded by multiple genes and exists in different isoforms depending on species and cell type (1-3). Fcγ RIII has two isoforms, Fcγ RIIIA and Fcγ RIIB. Fcγ RIII, the only Fcγ R found on natural killer cells, is also expressed on macrophages, neutrophils, and mast cells (1-3). Unlike Fcγ RI which binds IgG with high affinity, Fcγ RIIIA is a low affinity receptor that recognizes IgG as aggregates surrounding multivalent antigens during late immune responses (4, 5). The mature protein consists of an extracellular domain (ECD), a transmembrane segment, and a cytoplasmic domain. Within the ECD, rat Fcγ RIIIA shares 83% and 63% amino acid sequence identity with mouse and human Fcγ RIIIA, respectively.

References:

1. Van de Winkel, J. and P. Capes (1993) Immunol. Today. **14**:215.
2. Raghaven, M. and P. Bjorkman (1996) Annu. Rev. Cell Dev. Biol. **12**:181.
3. Ravetch, J. and S. Bolland (2001) Annu. Rev. Immunol. **19**:275.
4. Takai, T. (2002) Nature Rev. Immunol. **2**:580.
5. Chenoweth, A.M. *et al.* (2015) Immunol. Rev. **268**:175.