

DESCRIPTION

Source Mouse myeloma cell line, NS0-derived human IFN-gamma R1/CD119 protein
Met1-Gly245
Accession # P15260.1

N-terminal Sequence Analysis Glu18 & Gly20

Predicted Molecular Mass 25 kDa

SPECIFICATIONS

SDS-PAGE 40 kDa and 50 kDa, reducing conditions

Activity Measured by its ability to inhibit rhIFN-γ mediated protection of HeLa human cervical epithelial carcinoma cells to viral lysis. Meager, A. (1987) in *Lymphokines and Interferons, a Practical Approach*. Clemens, M.J. *et al.* (eds): IRL Press. 129. The ED₅₀ for this effect is 1-3 μg/mL in the presence of 2 ng/mL rhIFN-γ.

Endotoxin Level <1.0 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 500 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

The high-affinity IFN-γ receptor complex is made up of two type I membrane proteins, IFN-γ R1 (IFN-γ Rα) and IFN-γ R2 (IFN-γ Rβ). Both proteins are members of the type II cytokine receptor family and share approximately 52% overall sequence identity. IFN-γ R1 is the ligand-binding subunit that is necessary and sufficient for IFN-γ binding and receptor internalization. IFN-γ R2 is required for IFN-γ signaling but does not bind IFN-γ by itself. Human IFN-γ R1 cDNA encodes a 499 amino acid (aa) residue protein with a 17 aa signal peptide, a 228 aa extracellular domain, a 23 aa transmembrane domain, and a 221 aa intracellular domain. Human and mouse IFN-γ R1 share 52% amino acid sequence similarity and bind IFN-γ in a species-specific manner. IFN-γ R1 is constitutively expressed in most cell types. Soluble IFN-γ R1 that binds IFN-γ has been detected in biological fluids. The recombinant soluble IFN-γ R1 produced at R&D Systems has been shown to bind IFN-γ with high affinity and is a potent IFN-γ antagonist.

References:

1. Bach, E.A. *et al.* (1997) *Annu. Rev. Immunol.* **15**:563.