

Recombinant Human IFN-gamma Protein

Cat. No. 111306

DESCRIPTION

Expression system	<i>E. coli</i>
Amino acid sequence	Met; Gln24-Gly166, Accession # P01579
Molecular mass	Recombinant Human IFN-gamma Protein, a non-glycosylated monomer containing 144 amino acid residues, has a predicted molecular mass of approximately 16.9 kDa.

SPECIFICATIONS

Purity	> 95% by SDS-PAGE gel and HPLC analyses.
Endotoxin	Less than 0.1 EU/μg of rHuIFN-γ as determined by LAL test.
Activity	The ED ₅₀ as measured in anti-viral assays using human HeLa cells infected with encephalomyocarditis (EMC) virus is 0.15-0.80 ng/ml.
Formulation	Lyophilized from a 0.22 μm filtered solution in PBS. See CoA for details.
Reconstitution	Always centrifuge tubes before opening. Do not mix by vortex or pipetting. Reconstitute in sterile distilled water to a concentration of 0.1-1.0 mg/mL. Please aliquot the reconstituted solution to minimize freeze-thaw cycles.

SHIPPING & STORAGE

Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature listed below.
Storage	Please use a manual defrost freezer and avoid repeated freeze-thaw cycles. ● Lyophilized protein should be stored at ≤ -20°C, stable for 12 months after receipt. ● Reconstituted protein solution can be stored at 2-8°C for 1 month. ● Aliquots of reconstituted samples are stable at ≤ -20°C for 3 months.

BACKGROUND

Human Interferon-gamma (IFN-γ) is a key type II interferon, encoded by the IFNG gene in humans. Unlike type I interferons, it is primarily secreted by activated T cells and natural killer (NK) cells, playing a pivotal role in regulating adaptive and innate immune responses.

Structurally, IFN-γ exists as a monomer in its basic form, consisting of a core of six α-helices and an extended unfolded C-terminal sequence. Notably, its biologically active form is a noncovalently linked homodimer, formed by anti-parallel interlocking of two identical monomers, which is essential for its receptor binding and functional activity.

Functionally, IFN-γ enhances macrophage activation, promotes antigen presentation, and modulates T cell differentiation, thereby resisting intracellular pathogens and tumor cells. Clinically, it is associated with immune disorders and used in research on infectious diseases and cancer immunotherapy, serving as a critical marker of Th1 immune responses.

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For research, laboratory or further evaluation purposes. NOT for Human Use.

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