

Animal-Free IFN-beta Protein, Human (His)

Cat. No.:	HY-P700090AF
Synonyms:	IFNB1; Type I Interferon
Species:	Human
Source:	E. coli
Accession:	P01574/NP_002167.1 (M22-N187)
Gene ID:	3456
Molecular Weight:	Approximately 20.84 kDa

PROPERTIES

AA Sequence	<pre> MSYNLLGFLQ RSSNFQCQKL LWQLNGRLEY CLKDRMNFDI PEEIKQLQQF QKEDAALTIY EMLQNIFAIF RQDSSSTGWN ETIVENLLAN VYHQINHLKT VLEEKLEKED FTRGKLMSSL HLKRYYGRI L HYLKAKEYSH CAWTIVRVEI LRNFYFINRL TGYLRN </pre>
Biological Activity	<p>1. Measure by its ability to induce apoptosis in HeLa cells. The ED₅₀ for this effect is <15 ng/mL.</p> <p>2. Measure by its ability to induce cytotoxicity in TF-1 cells. The ED₅₀ for this effect is <0.1 ng/mL. The specific activity of recombinant human IFN beta 1a is approximately >1 x10⁷ IU/ mg.</p>
Appearance	Lyophilized powder.
Formulation	Lyophilized from a solution containing 1X PBS, pH 8.0, trehalose.
Endotoxin Level	<0.1 EU per 1 µg of the protein by the LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years from date of receipt. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	The IFN-beta Protein encodes a cytokine belonging to the interferon family, released as part of the innate immune response against pathogens. This protein falls under the type I class of interferons, crucial for defense against viral infections, as well as participating in cell differentiation and anti-tumor defenses. Upon secretion in response to pathogens, type I interferons
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bind a homologous receptor complex, triggering the transcription of genes involved in inflammatory cytokines and chemokines. Aberrant activation of type I interferon secretion is associated with autoimmune diseases. Mice deficient for this gene exhibit several phenotypes, including defects in B cell maturation and increased susceptibility to viral infection, emphasizing the pivotal role of IFN-beta Protein in immune responses and host defense.

Caution: Product has not been fully validated for medical applications. For research use only.

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