



Recombinant Human IFN-beta

20190611DS



FOR RESEARCH ONLY! NOT FOR HUMAN USE!

Cat.-no.:	100-191S
Size:	5 µg
Lot. No.:	According to product label

Scientific Background

Gene-ID (NCBI):	3456
Synonyms:	IFNB1; IFB; IFF; IFNB;

Proteins of this family play an important role in inducing non-specific resistance against a broad range of viral infections. They also affect cell proliferation and modulate immune responses. Produced by peripheral blood leukocytes and lymphoblastoid cells, IFN-alpha is an acid stable molecule that signals through IFN-alpha/betaR, which is also used by IFN-beta. Both IFNs have similar anti-viral activity and regulate expression of MHC class I antigens. IFN-alpha contains four highly conserved cysteine residues which form two disulfide bonds, one of which is necessary for biological activity. Recombinant human IFN-beta is a 20.0 kDa protein containing 166 amino acid residues. Due to glycosylation, IFN-beta has an approximate MW of 22.3 kDa based on SDS-PAGE gel and Mass Spectrometry.

Sequence

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MSYNLLGFLQ RSSNFQCQKL LWQLNGRLEY CLKDRMNFDI  
PEEIKQLQQF QKEDAALTIY EMLQNIFAIF RQDSSSTGWN  
ETIVENLLAN VYHQINHLKT VLEEKLEKED FTRGKLMSSL  
HLKRYYGRIL HYLKAKEYSH CAWTIVRVEI LRNFYFINRL TGYLRN
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Database References

Protein RefSeq:	NP_002167.1
Uniprot ID:	P01574
mRNA RefSeq:	NM_002176

Product Specifications

Expressed in	CHO cells
Purity	> 95% by SDS-PAGE & HPLC analyses
Endotoxin level	< 0.1 ng /µg of protein (<1EU/µg).
Formulation	Lyophilized from 10 mM Sodium Citrate, 100 mM Sodium Chloride + 10 mM Sucrose
Length (aa):	166
MW:	20 kDa

Stability: The lyophilized protein is stable at room temperature for 1 month and at 4°C for 6 months. Reconstituted working aliquots are stable for 1 week at 2°C to 8°C and for 12 months at -20°C to -80°C.

Reconstitution: Centrifuge vial prior to opening. Reconstitute in water to a concentration of 1.0 mg/ml. *Do not vortex*. This solution can be stored at 2-8°C for up to 1 week. For extended storage, it is recommended to further dilute in a buffer containing a carrier protein (example 0.1% BSA) and store in working aliquots at -20°C to -80°C.



AVOID REPEATED FREEZE AND THAW CYCLES!

Biological Activity: Assay #1: Determined by its ability to induce STAT1/STAT2 activation in human COLO 205 ISRE LUC reporter cells. Assay #2: Determined by a cytotoxicity assay using human TF-1 cells. The expected ED50 is ≤ 0.1 ng/ml (specific activity of ≥ 1 x 10⁷ units/mg).