

## IFNB1

### Recombinant Human Interferon beta 1b

<b>Catalog No.</b>	CSI12305A CSI12305C	<b>Quantity:</b>	10 µg 1 mg
<b>Alternate Names:</b>	Fibroblast interferon, IFN-beta		
<b>Description:</b>	Human IFN-beta is a type I interferon, normally produced by fibroblasts, involved mainly in innate immune response, with antiviral and antiproliferative effects. It is considered first-line therapy for management of MS because of its immunomodulatory properties. It downregulates HLA class II molecules in antigen presenting cells. It also upregulates the expression of PDL-2 inhibitory molecules, which interact with their respective receptors on the T cells and induce apoptosis. It also inhibits proliferation of macrophages and so activation of autoreactive T cells.		
<b>UniProt ID:</b>	P01574		
<b>Gene ID:</b>	3456		
<b>Source:</b>	<i>E. coli</i> The IFN-beta gene was cloned from human fibroblasts and altered to substitute Serine for the Cysteine residue found at position 17.		
<b>Molecular Weight:</b>	18.5 kDa (165 aa) monomer		
<b>Formulation:</b>	Lyophilized from a 1 mg/ml solution containing 5% human albumin and 5% dextrose		
<b>Purity:</b>	≥98% by SDS-PAGE and HPLC analysis		
<b>Endotoxin Level:</b>	< 0.1 ng per µg of IFN-beta		
<b>Sequence Identity:</b>	N-terminal Ser-Tyr-Asn-Leu-Leu		
<b>Quantitation:</b>	1. RP-HPLC using calibrated IFN-beta as a reference standard 2. $E_{280nm}^{0.1\%} = 1.493$ This value is calculated by the PC GENE computer analysis program of protein sequences (IntelliGenetics).		
<b>Specific Activity:</b>	> 1.0 x 10 <sup>7</sup> IU/mg, determined in a viral resistance assay using human WISH cell line and VSV virus, or the monkey VERO cell line with EMCV virus		
<b>Reconstitution:</b>	<b>Centrifuge vial prior to opening.</b> Add sterile distilled water to the vial to fully solubilize the protein to a concentration of 0.25 mg/ml. After complete solubilization of the protein, it can be further diluted to other aqueous solutions.		
<b>Storage &amp; Stability:</b>	Store lyophilized protein at -20°C to -80°C for up to 1 year. Reconstituted protein is stable at -20°C to -80°C for longer storage. <b>Avoid repeated freeze-thaw cycles.</b>		

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