

Recombinant Human Interferon-beta 1 beta (rh IFN-beta 1b)

Synonyms: Leukocyte interferon, B cell interferon, Type I interferon, IFNB1, IFB, IFF, IFNB

Introduction: Interferon-beta 1b has antiviral, antibacterial and anticancer activities.

Description: Recombinant human IFN-beta 1b produced in *E.Coli* is a single, non-glycosylated mutein (variant form) of human Interferon beta-1b polypeptide chain containing 165 amino acids and having a molecular mass of 18510.86 Dalton. The Interferon beta gene was cloned from human fibroblasts and altered to substitute serine for the cysteine residue found at position 17. rh IFN-beta 1b is purified by proprietary chromatographic techniques.

Source: *Escherichia Coli*

Physical Appearance: Sterile filtered white lyophilized (freeze-dried) powder.

Formulation: Lyophilized from a 1mg/ml solution containing 50 mg human albumin and 50 mg mannitol. The aliquots of 1µg and 2µg contain Trehalose 5% (w/vol) for better recovery

Solubility: It is recommended to reconstitute the lyophilized rh IFN-beta 1b in sterile H₂O at a concentration of 0.25mg/ml, which can then be further diluted to other aqueous solutions.

Stability: Lyophilized rh IFN-beta 1b although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution rh IFNbeta-1b should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

Purity: Greater than 98.0% as determined by RP-HPLC and by SDS-PAGE.

Amino acid sequence: The sequence of the first five N-terminal amino acids was determined and was found to be: Ser-Tyr-Asn-Leu-Leu.

Biological Activity: The specific activity as determined in a viral resistance assay (human "Wish" cell line and VSV virus or the monkey VERO cell line with EMCV virus) was found to be 3.2 x 10⁷ IU/mg.

Protein content: Protein quantitation was carried out by two independent methods:

1. UV spectroscopy at 280 nm using the absorbency value of 1.493 as the extinction coefficient for a 0.1% (1mg/ml) solution. This value is calculated by the PC GENE computer analysis program of protein sequences (IntelliGenetics).
2. Analysis by RP-HPLC, using a calibrated solution of IFN-beta as a Reference Standard.

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<i>small</i>	2 µg	Cat.N°	11343542
<i>medium</i>	10 µg	Cat.N°	11343543
<i>large</i>	50 µg	Cat.N°	11343545

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