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# Certificate of Analysis and Data Sheet

## Recombinant Human Interferon-beta 1b

**Catalog No.**  
228-10823

**Source:**  
*E. Coli*

### ***Synonyms***

Leukocyte interferon, B cell interferon, Type I interferon, IFNB1, IFB, IFF, IFNB, IFN-b 1b, MGC96956.

### ***Introduction***

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

### ***Description***

Interferon beta 1b Human Recombinant 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 IFN-beta gene was cloned from human fibroblasts and altered to substitute Serine for the Cysteine residue found at position 17.

IFN beta-1b is purified by proprietary chromatographic techniques.

### ***Formulation***

Lyophilized from 1mg/ml solution containing 50mg Human Albumin & 50mg dextrose.

### ***Solubility***

It is recommended to reconstitute the lyophilized Interferon beta-1b in sterile 18MΩ-cm H<sub>2</sub>O not less than 100μg/ml, which can then be further diluted to other aqueous solutions.

### ***Stability***

Lyophilized Interferon-beta 1b although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution IFNB 1b should be stored at 4°C between 2-7 days and for future use below -18°C.

**Please prevent freeze-thaw cycles.**

### ***Purity***

Greater than 98.0% as determined by(a) Analysis by RP-HPLC.  
(b) Analysis by SDS-PAGE.

**The products are furnished for LABORATORY RESEARCH USE ONLY.  
Not for diagnostic or therapeutic use.**



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### ***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 32,000,000 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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