

IFN- β 1b

Interferon β 1b

human, recombinant, *E. coli*

Cat. No.	Amount
PR-445	10 μ g

For *in vitro* use only
Quality guaranteed for 12 months
Store at -20°C

Avoid freeze / thaw cycles

Form

Lyophilized. Lyophilized from a 1mg/ml solution containing 50mg human albumine and 50mg dextrose

Solubility

It is recommended to reconstitute the lyophilized IFN- β in sterile bidest H₂O not less than 100 μ g/ml, which can then be further diluted to other aqueous solutions.

Activity

EC₅₀: 3.2 x 10⁷ IU/mg, determined in a viral resistance assay (human "Wish" cell line and VSV virus or the monkey VERO cell line with EMCV virus).

Molecular Weight

19 kDa

Amino acid sequence

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

Purity

≥ 95% by SDS-PAGE and RP-HPLC

Description

Interferon β 1b is a single, non-glycosylated mutein of human Interferon β 1bp polypeptide chain containing 165 amino acids.

Interferon β is one of the type I interferons produced by fibroblasts in response to stimulation by live or inactivated virus or by double-stranded RNA. It is a cytokine with antiviral, antiproliferative, and immunomodulating activity. The synthesis of IFN- β can be induced by common inducers of interferons, including viruses, double-stranded RNA, and microorganisms. It is induced also by some cytokines such as TNF and IL-1.

Recombinant human IFN- β 1b produced in *E. coli* is a single, non-glycosylated form of human Interferon β 1b polypeptide chain containing 165 amino acids and having a molecular mass of 18.511 kDa. The Interferon β gene was cloned from human fibroblasts and altered to substitute Serine for the Cysteine residue found at position 17. IFN- β 1b is purified by proprietary chromatographic techniques.

Selected References:

- Bitsch *et al.* (2004) Autoantibody synthesis in primary progressive multiple sclerosis patients treated with interferon beta-1b. *J. Neurol.* **251**:1498.
- Kobelt *et al.* (2003) Cost-utility of interferon beta(1b) in the treatment of patients with active relapsing-remitting or secondary progressive multiple sclerosis. *Eur. J. Health. Econ.* **4**:50.
- Deisenhammer *et al.* (2004) Longitudinal analyses of the effects of neutralizing antibodies on interferon beta-1b in relapsing/remitting multiple sclerosis. *Mult. Scler.* **10**:713.
- Panitch *et al.* (2004) Interferon beta-1b in secondary progressive MS: results from a 3-year controlled study. *Neurology.* **63**:1788.
- Kappos *et al.* (2004) Interferon beta-1b in secondary progressive MS: a combined analysis of the two trials. *Neurology.* **63**:1779
- Bitsch *et al.* (2004) Interferon beta-1b modulates serum sVCAM-1 levels in primary progressive multiple sclerosis. *Acta Neurol. Scand.* **110**:386.