

IFN- α 1b

Interferon α 1b

human, recombinant, *E. coli*

Cat. No.	Amount
PR-443	100 μ g

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

Avoid freeze / thaw cycles

Form

Lyophilized.

Solubility

It is recommended to reconstitute the lyophilized IFN- α in sterile bidest H₂O not less than 100 μ g/ml, which can then be further diluted to other aqueous solutions. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).

Activity

EC₅₀: 1 x 10⁸ IU/mg, determined in a viral resistance assay using bovine kidney MDBK cells.

Endotoxin

Less than 0.1 ng/ μ g (IEU/ μ g) of IFN- α .

Molecular Weight

19 kDa

Purity

≥ 95% by SDS-PAGE and RP-HPLC

Description

At least 23 different variants of IFN- α are known. The individual proteins have molecular masses between 19-26 kDa and consist of proteins with lengths of 156-166 and 172 amino acids. All IFN- α subtypes possess a common conserved sequence region between amino acid positions 115-151 while the amino-terminal ends are variable. Many IFN- α subtypes differ in their sequences at only one or two positions. Naturally occurring variants also include proteins truncated by 10 amino acids at the carboxyterminal end.

Recombinant Interferon alpha-1b produced in *E. coli* is a single, non-glycosylated, polypeptide chain containing 166 amino acids and having a molecular mass of 19.392 kDa. The Interferon-alpha 1b gene was obtained from human leukocytes.

The IFN-alpha-1b is purified by proprietary chromatographic techniques.

Selected References:

- Indraccolo *et al.* (2002) Differential effects of angiostatin, endostatin and interferon-alpha(1) gene transfer on *in vivo* growth of human breast cancer cells. *Gene Ther.* **9**:867.
- Liu *et al.* (2001) High-yield expression and purification of human interferon alpha-1 in *Pichia pastoris*. *Protein Expr. Purif.* **22**:381.
- Ivanov *et al.* (1997) Unusual effect of clusters of rare arginine (AGG) codons on the expression of human interferon alpha 1 gene in *Escherichia coli*. *Int. J. Biochem. Cell Biol.* **29**:659.
- Scarpa *et al.* (1997) Extracellular matrix remodelling in a murine mammary adenocarcinoma transfected with the interferon-alpha 1 gene. *J. Pathol.* **181**:116.
- Saraffova *et al.* (1996) Comparative study on the effect of signal peptide codons and arginine codons on the expression of human interferon-alpha 1 gene in *Escherichia coli*. *J. Interferon Cytokine Res.* **16**:745.