

## IFN- $\alpha$ 2a

### Interferon $\alpha$ 2a

#### human, recombinant, *E. coli*

Cat. No.	Amount
PR-439	100 $\mu$ g

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

#### Avoid freeze / thaw cycles

#### Form

Lyophilized white powder.

#### Solubility

It is recommended to reconstitute the lyophilized IFN- $\alpha$  in sterile bidest H<sub>2</sub>O not less than 100  $\mu$ 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

EC<sub>50</sub>: 2.7 x 10<sup>8</sup> U/mg, determined in a viral resistance assay using bovine kidney MDBK cells.

#### Molecular Weight

19.2 kDa

#### Purity

≥ 95% by SDS-PAGE and RP-HPLC

#### Description

Interferon- $\alpha$  is a single, non-glycosylated polypeptide chain containing 165 amino acids.

At least 23 different variants of IFN- $\alpha$  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- $\alpha$  subtypes possess a common conserved sequence region between amino acid positions 115-151 while the amino-terminal ends are variable. Many IFN- $\alpha$  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 Human IFN- $\alpha$  2a produced in *E. coli* is a single, non-glycosylated, polypeptide chain containing 165 amino acids and having a molecular mass of 19.2 kDa. The Interferon- $\alpha$  2a gene was obtained from human leukocytes.

The IFN- $\alpha$  is purified by proprietary chromatographic techniques.

#### Aminoacid Sequence

The sequence of the first five N-terminal aminoacids was determined and was found to be Cys-Asp-Leu-Pro-Gln, conforming to the sequence of native human IFN- $\alpha$ .

N-terminal methionine has been completely removed enzymatically.

#### Selected References:

- Zou *et al.* (2005) Effect of retinoic acid and interferon alpha-2a on transitional cell carcinoma of bladder. *J. Urol.* **173**:247.
- Sonmez *et al.* (2004) Effects of interferon-alpha-2a on Th3 cytokine response in multiple myeloma patients. *Tum. Ori.* **90**:387.
- Shepherd *et al.* (2004) Pegylated interferon alpha-2a and -2b in combination with ribavirin in the treatment of chronic hepatitis C: a systematic review and economic evaluation. *Health Technol. Assess.* **8**:1.
- Fossa *et al.* (2004) Interferon-alpha-2a with or without 13-cis retinoic acid in patients with progressive, measurable metastatic renal cell carcinoma. *Cancer* **101**:533.
- Pockros *et al.* (2004) Efficacy and safety of two-dose regimens of peginterferon alpha-2a compared with interferon alpha-2a in chronic hepatitis C: a multicenter, randomized controlled trial. *Am. J. Gastroenterol.* **99**:1298.