

## Recombinant Human Interferon-alpha2a

### Information

<b>Gene ID</b>	3440
<b>Accession #</b>	P01563
<b>Alternate Names</b>	
<b>Source</b>	Yeast
<b>M.Wt</b>	Approximately 19.2 kDa, a single non-glycosylated polypeptide chain containing 165 amino acids.
<b>AA Sequence</b>	CDLPQTHSLG SRRTLMMLAQ MRKISLFSCL KDRHDFGFPQ EEFGNQFQKA ETIPVLHEMI QQIFNLFSTK DSSAAWDETL LDKFYTELYQ QLNDLEACVI QGVGVTTETPL MKEDSILAVR KYFQRITLYL KEKKYSPCAW EVVRAEIMRS FSLSTNLQES LRSKE
<b>Appearance</b>	Sterile Filtered White lyophilized (freeze-dried) powder.
<b>Stability &amp; Storage</b>	Use a manual defrost freezer and avoid repeated freeze-thaw cycles - 12 months from date of receipt, -20 to -70 °C as supplied - 1 month, 2 to 8 °C under sterile conditions after reconstitution - 3 months, -20 to -70 °C under sterile conditions after reconstitution
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS, pH 7.4.
<b>Reconstitution</b>	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤ -20 °C. Further dilutions should be made in appropriate buffered solutions.
<b>Biological Activity</b>	Fully biologically active when compared to standard. The specific activity determined by an anti-viral assay is no less than $1.0 \times 10$ IU/mg.
<b>Shipping Condition</b>	Gel pack.
<b>Handling</b>	Centrifuge the vial prior to opening.
<b>Usage</b>	For Research Use Only! Not to be used in humans.

### Components and Storage

Components	100µg	500µg	
Recombinant Human Interferon-alpha2a	100µg	500µg	

Use a manual defrost freezer and avoid repeated freeze-thaw cycles

- 12 months from date of receipt, -20 to -70 °C as supplied
- 1 month, 2 to 8 °C under sterile conditions after reconstitution
- 3 months, -20 to -70 °C under sterile conditions after reconstitution

## Quality Control

Purity	> 97 % by SDS-PAGE and HPLC analyses.
Endotoxin	Less than 1 EU/μg of rHuIFN-α2a as determined by LAL method.

## Description

IFN- $\alpha$ s are proteins secreted by leukocyte. They are mainly involved in innate immune response against viral infection. The IFN- $\alpha$  family has 13 subtypes and 23 different variants. 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 carboxy-terminal end.

## Reference

1. Tarhini AA, Gogas H, Kirkwood JM. 2012. J Immunol, 189: 3789-93
2. Zarogoulidis P, Kioumis I, Papanas N, et al. 2012. J Chemother, 24: 173-7
3. Tohyama M, Yang L, Hanakawa Y, et al. 2012. J Invest Dermatol, 132: 1933-5
4. Corssmit EP, Heijligenberg R, Hack CE, et al. 1997. Clin Exp Immunol, 107: 359-63.

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