

# Recombinant Human Interferon, Alpha 2, His-tagged

**Cat. No.** IFNA2-17H    **Lot. No.** (See product label)

## SPECIFICATION

|                            |                                                                                                                                                                                                                                                                                                        |
|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Overview</b>    | Recombinant Human Interferon Alpha 2a produced in Plant is a single, glycosylated, polypeptide chain containing 165 amino acids and having a molecular mass of 19 kDa. The Interferon-2a contains affinity 6xHis tag on C-terminus. The IFN-A2a is purified by proprietary chromatographic techniques. |
| <b>Species</b>             | Human                                                                                                                                                                                                                                                                                                  |
| <b>Source</b>              | Nicotiana Sp.                                                                                                                                                                                                                                                                                          |
| <b>Description</b>         | IFN-alpha is produced by macrophages and has antiviral activities. Interferon stimulates the production of two enzymes: protein kinase and an oligoadenylate synthetase.                                                                                                                               |
| <b>Amino Acid Sequence</b> | The sequence of the first twelve N-terminal amino acids was determined and was found to be Cys-Asp-Leu-Pro-Gln-Thr-His-Ser-Leu-Gly-Ser-Arg.                                                                                                                                                            |
| <b>Physical Appearance</b> | Sterile Filtered White lyophilized (freeze-dried) powder.                                                                                                                                                                                                                                              |
| <b>Purity</b>              | Greater than 99.0% as determined by both: (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.                                                                                                                                                                                                           |
| <b>Formulation</b>         | Lyophilized, containing 50% SDS.                                                                                                                                                                                                                                                                       |
| <b>Solubility</b>          | It is recommended to reconstitute the lyophilized Interferon-alpha 2a in sterile 18MΩ-cm H <sub>2</sub> O not less than 100g/ml, which can then be further diluted to other aqueous                                                                                                                    |

 Tel: 1-631-559-9269    1-516-512-3133

 Email: [info@creative-biomart.com](mailto:info@creative-biomart.com)     Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

solutions.

### Biological Activity

The specific activity was determined by a quantitative gene report bioassay using human Type I interferon-sensitive cells. Compared with bacterial derived recombinant IFN-a 2a, assayed in the same conditions, plant derived IFN-alpha 2a showed  $6.1 \times 10^8$  Units/mg in reference to a viral resistance assay using bovine kidney MDBK cells.

### Storage

Lyophilized Interferon alpha 2a although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution IFN-alpha 2a should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

## GENE INFORMATION

### Gene Name

IFNA2 interferon, alpha 2 [ Homo sapiens ]

### Synonyms

IFNA2; Interferon, Alpha 2; IFNA; INFA2; MGC125764; MGC125765; Interferon alpha A; Alpha-2a interferon; Interferon alpha 2b; OTTHUMP00000021143; Interferon alpha-A; LeIF A; Interferon, alpha-2

### Gene ID

3440

### mRNA Refseq

NM\_000605

### Protein Refseq

NP\_000596

### MIM

147562

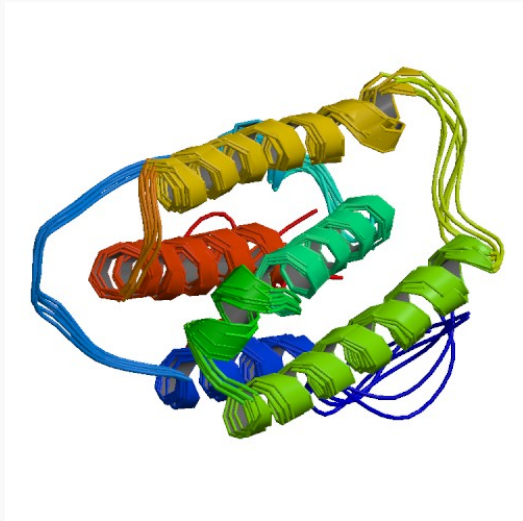
### UniProt ID

P01563

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|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Chromosome Location</b>          | 9p22                                                                                                                                                                                                                                                                                 |
| <b>Pathway</b>                      | Autoimmune thyroid disease; Cytokine-cytokine receptor interaction; Jak-STAT signaling pathway; Natural killer cell mediated cytotoxicity; RIG-I-like receptor signaling pathway; Regulation of autophagy; Toll-like receptor signaling pathway; Antigen processing and presentation |
| <b>Function</b>                     | cytokine activity; interferon-alpha/beta receptor binding                                                                                                                                                                                                                            |
| <b>PDB rendering based on 1itf.</b> |                                                                                                                                                                                                   |