

Recombinant Human Interferon, Alpha 2, His-tagged

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

SPECIFICATION

Product Overview	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.
Species	Human
Source	Nicotiana Sp.
Description	IFN-alpha is produced by macrophages and has antiviral activities. Interferon stimulates the production of two enzymes: protein kinase and an oligoadenylate synthetase.
Amino Acid Sequence	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.
Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Purity	Greater than 99.0% as determined by both: (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.
Formulation	Lyophilized, containing 50% SDS.
Solubility	It is recommended to reconstitute the lyophilized Interferon-alpha 2a in sterile 18MΩ-cm H ₂ O not less than 100g/ml, which can then be further diluted to other aqueous

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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- α 2a, assayed in the same conditions, plant derived IFN- α 2a showed 6.1×10^8 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- α 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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Chromosome Location	9p22
Pathway	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
Function	cytokine activity; interferon-alpha/beta receptor binding
PDB rendering based on 1itf.	