

## Recombinant Human Interferon, Alpha 2, His-tagged

Cat. No. IFNA2-009N Lot. No. (See product label)

### SPECIFICATION

<b>Product Overview</b>	This protein is produced in an expression system using <i>Nicotiana sp.</i> plants as an expression host
<b>Species</b>	Human
<b>Source</b>	<i>Nicotiana Benthamiana</i>
<b>Description</b>	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 carboxy-terminal end.
<b>Formulation</b>	Lyophilized powder, containing 80% SDS.
<b>Purity</b>	Purity is assessed by SDS PAGE followed by Silver Stain Detection or Western blot analysis and by Capillary Electrophoresis using a 2100 Bioanalyzer.
<b>Quality analysis</b>	Gel and capillary electrophoresis for estimation of purity. Mass spectrometry of tryptic digest products for identity determination.
<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, conforming to the sequence

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nce of native human-IF $\alpha$ -2a. Other protein fragments detected by mass spectroscopy of tryptic digestion are highlighted in red on the following sequence representation. CD LPQTHSLGSRRTLMLLAQMRKISLFSCLKDRHDFGFPQEEFGNQFQKAETIPVLHEM IQQIFNLFSTKDSSAAWDETLLDKFYTELYQQLNLEACVIQGVGVTEPLMNEDSIL AVRKYFQRITLYLKEKKYSPCAWEVVRAEIMRSFSLSTNLQESLRSKE

**Endotoxin** < 0.0005 EU/g by LAL test.

**Biological Activity** IFN-alpha 2a is fully biologically active when compared to standard. The specific activity was determined by a quantitative gene reported bioassay using human Type I interferon-sensitive cells. Compared with other recombinant IF $\alpha$ -2a, assayed in the same conditions, IFN-alpha 2a showed 6.1 × 10<sup>8</sup> Units/mg in reference to a viral resistance assay using bovine kidney MDBK cells.

**Storage** Product is presented as a lyophilized powder stable at 4°C. Adding 1 ml of distilled water to 1 mg of lyophilized powder gives a solution of 0.2 mg/ml of IFN Alpha-2a. After reconstitution in appropriate buffer aliquots should be stored at -70°C.

## GENE INFORMATION

**Gene Name** [IFNA2 interferon, alpha 2 \[ Homo sapiens \]](#)

**Official Symbol** INFA2

**Synonyms** IFNA; INFA2; MGC125764; MGC125765; Leukocyte interferon; B cell interferon, Type I interferon; IFNA2; IFN- $\alpha$  2a; Interferon alpha-A; LeIF A; Interferon alpha-2; Interferon alpha-2 Precursor;interferon, alpha 2

**Gene ID** [3440](#)

**mRNA Refseq** [NM\\_000605](#)

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<b>Protein Refseq</b>	NP_000596
<b>MIM</b>	147562
<b>UniProt ID</b>	P01563
<b>Chromosome Location</b>	9p22
<b>Function</b>	interferon-alpha/beta receptor binding

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