Recombinant Human Interferon, Alpha 2, His-tagged

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

SPECIFICATION

Product Overview	This protein is produced in an expression system using Nicotiana sp. plants as an expression host
Species	Human
Source	Nicotiana Benthamiana
Description	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.
Formulation	Lyophilized power, containing 80% SDS.
Purity	Purity is assessed by SDS PAGE followed by Silver Stain Detection or Western blot analysis and by Capillary Electrophoresis using a 2100 Bioanalyzer.
Quality analysis	Gel and capillary electrophoresis for estimation of purity. Mass spectrometry of tryptic digest products for identity determination.
Amino acid sequence	The sequence of the first twelve N-terminal amino acids was determined and was fou nd to be Cys-Asp-Leu-Pro-Gln-Thr-His-Ser-Leu-Gly-Ser-Arg, conforming to the seque

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	nce of native human-IFα-2a. Other protein fragments detected by mass spectroscopy of tryptic digestion are highlighted in red on the following sequence representation.CDLPQTHSLGSRRTLMLLAQMRKISLFSCLKDRHDFGFPQEEFGNQFQKAETIPVLHEMIQQIFNLFSTKDSSAAWDETLLDKFYTELYQQLNDLEACVIQGVGVTETPLMNEDSILAVRKYFQRITLYLKEKKYSPCAWEVVRAEIMRSFSLSTNLQESLRSKE
Endotoxin	< 0.0005 EU/μg 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 IFα-2a, assayed in the same conditions, IFN-alpha 2a showed 6.1 × 108 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-α 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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Protein Refseq	NP_000596
MIM	147562
UniProt ID	P01563
Chromosome Location	9p22
Function	interferon-alpha/beta receptor binding

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