

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 <i>Nicotiana</i> sp. plants as an expression host
Species	Human
Source	<i>Nicotiana Benthamiana</i>
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 found to be Cys-Asp-Leu-Pro-Gln-Thr-His-Ser-Leu-Gly-Ser-Arg, conforming to the sequence

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

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

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nce of native human-IF α -2a. Other protein fragments detected by mass spectroscopy of tryptic digestion are highlighted in red on the following sequence representation. CD LPQTHSLGSRRTLMLLAQMRKISLFSCLKDRHDFGFPQEEFGNQFQKAETIPVLHEM IQQIFNLFSTKDSSAAWDETLLDKFYTELYQQQLNDLEACVIQGVGVTTETPLMNEDSIL 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 α -2a, assayed in the same conditions, IFN-alpha 2a showed 6.1×10^8 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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