RayBiotech, Inc.
3607 Parkway Lane suite 200
Norcross,GA 30092
Tel: 770-729-2992, 1-888-494-8555
Fax: 770-206-2393
Website: www.raybiotech.com
Email: info@raybiotech.com

Certificate of Analysis and Data Sheet

Recombinant Human Interferon-alpha 2a

Catalog No.	**Source**
228-10817	*Escherichia Coli.*

Synonyms
Leukocyte interferon, B cell interferon, Type I interferon, IFNA2, IFN-α 2a.

Introduction
IFN-alpha is produced by macrophages and has antiviral activities. Interferon stimulates the production of two enzymes: protein kinase and an oligoadenylate synthetase.

Description
Interferon Alpha Human 2a Recombinant produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 165 amino acids and having a molecular mass of 19241 Dalton.
The Interferon-a 2a gene was obtained from human leukocytes.
The IFN-A 2a is purified by proprietary chromatographic techniques.

Physical Appearance
Sterile Filtered White lyophilized (freeze-dried) powder.

Formulation
Lyophilized without additives.

Purity
Greater than 98.0% as determined by both
(a) Analysis by RP-HPLC.
(b) Analysis by SDS-PAGE.

Biological Activity
The specific activity as determined in a viral resistance assay using bovine kidney MDBK cells was found to be 2.7 x 10^8 IU/mg.

Solubility
It is recommended to reconstitute the lyophilized Interferon-alpha 2a in sterile 18MΩ-cm H2O not less than 100µg/ml, which can then be further diluted to other aqueous solutions.
Reconstitute at 0.1 mg/ml with 5mM NaAcetate, pH-6.

RayBiotech, Inc.
3607 Parkway Lane suite 200
Norcross,GA 30092
Tel: 770-729-2992, 1-888-494-8555
Fax: 770-206-2393
Website: www.raybiotech.com
Email: info@raybiotech.com

Stability

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.

Amino acid sequence

The sequence of the first five N-terminal amino acids was determined and was found to be Cys-Asp-Leu-Pro-Gln, conforming to the sequence of native human IFN-a.
N-terminal methionine has been completely removed enzymatically.

Protein content

Protein quantitation was carried out by two independent methods
1. UV spectroscopy at 280 nm using the absorbency value of 0.924 as the extinction coefficient for a 0.1% (1mg/ml) solution. This value is calculated by the PC GENE computer analysis program of protein sequences (IntelliGenetics).
2. Analysis by RP-HPLC, using a calibrated solution of IFN-a 2a as a Reference Standard.