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Product Information

Interferon from human leukocytes

Product Number **I 2396**
Storage Temperature -20 °C

Product Description

The molecular weights of IFN- α range from 16 to 25 kDa.

The isoelectric point of the IFN- α species ranges between 5.7 and 7.0. The species IFN- α W is slightly basic and its isoelectric point is around 8.5.

Natural human leukocyte α -interferon is a mixture of at least 10 IFN- α species. The major component in the natural human interferon preparation is IFN- α 1 (IFN- α D). The next predominant one is IFN- α 2. α -1 and α -2 make up more than 50% of the total interferon in the mixture. The third major species is IFN- α W (about 15%); other known species are IFN- α F (at least 5%) and IFN- α 4; minor species include IFN- α 5 (IFN- α G), IFN- α 14 and IFN- α 16. All of these components are closely related structurally and contain 166 amino acids. The homology among the sequences is 80-90%.

Three species of IFN- α are glycosylated: IFN- α 2 which is O-glycosylated at Thr¹⁰⁷, IFN- α W, which is N-glycosylated at Asn⁷⁸, and IFN- α 14. Most IFN- α species are not glycosylated. There are two disulfide bonds for the α -interferons between residues 1 and 98/99 and 29 and 138/139, respectively. Reduction of sulfhydryls results in the loss of antiviral activity of leukocyte interferon.

Interferon has been used for treatment of hepatitis.^{1,2,3}

The product is supplied as a solution in phosphate buffered saline, pH approximately 7.3.

Precautions and Disclaimer

For Laboratory Use Only. Not for drug, household or other uses.

Storage/Stability

The human IFN- α species are resistant to acid (pH 2) treatment. Most of the activity is retained after treatment for several hours with 80-85% ethanol at 0-5 °C. Solutions for injection were stable (activity measured by an antiviral assay) for one week at 25 °C, for 6 months at 2-8 °C, and for three years when stored at -20 °C.

References

1. Ryff, J.C., Usefulness of interferon for treatment of hepatitis C. *J. Hepatol.*, **22**, 101-109 (1995).
2. Dusheiko, G.M., and Roberts, J.A., Treatment of Chronic Type B and C Hepatitis with Alpha Interferon: An Economic Evaluation. Poster presented at the 29th Annual Meeting of the European Association for the Study of the Liver, Athens-Vouliagmeni, Greece, September 7-10, (1994).
3. Terrault, N., and Feinman, S.V., Interferons for viral hepatitis. *Transfus. Med. Rev.*, **9**, 29-52 (1995).

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