

## Product Information

### Interferon $\alpha$ 2A human

recombinant, expressed in HEK 293 cells

Catalog Number **SRE0013**

Storage Temperature  $-20^{\circ}\text{C}$

Synonyms: IFN  $\alpha$  2A, Interferon alpha-A, LeIF A

### Product Description

Interferon  $\alpha$  2A belongs to the type I interferon protein family.<sup>1,2</sup> It is produced by many cell types in response to viral infection.<sup>2</sup> It has antiproliferative and antitumor activities<sup>3</sup>, as well as induction of apoptosis and inflammatory response.<sup>4</sup>

Recombinant human IFN  $\alpha$  2A is expressed in HEK 293 cells as a glycosylated monomer of 165 amino acids, with an average molecular weight of 20 kDa (monomer).

This product is lyophilized from phosphate buffered saline.

Activity:  $\geq 1 \times 10^8$  Units/mg

The biological activity of recombinant human IFN  $\alpha$  2A is tested in the cytopathic effect inhibition assay using A549 cells with EMC virus. A cytopathic effect of 50% is produced with 1 unit/ml interferon. The units are determined with respect to NIH international standard reference for human interferon-alpha A.

Purity:  $\geq 98\%$  (SDS-PAGE)

Endotoxin level:  $\leq 1$  EU/ $\mu\text{g}$  IFN  $\alpha$  2A

### Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

### Preparation Instructions

Briefly centrifuge the vial before opening. It is recommended to reconstitute the protein in sterile DDW containing 0.1% endotoxin-free recombinant human serum albumin, to a final concentration of 100  $\mu\text{g}/\text{ml}$ .

### Storage/Stability

Store product at  $-20^{\circ}\text{C}$ . The product retains activity for at least 2 years as supplied. After initial thawing it is recommended to store the protein in working aliquots at  $-20^{\circ}\text{C}$ .

### References

1. Adolf, G. R. et al., Natural human interferon- $\alpha 2$  is O-glycosylated, *Biochem. J.* **276**, 511-518 (1991).
2. Bogdan C, Mattner J, Schleicher U, The role of type I interferons in non-viral infections *Immunol Rev* **202**, 33-48 (2004)
3. Garbe C, Krasagakis K, Zouboulis CC, Schröder K, Krüger S, Stadler R, Orfanos CE. Antitumor activities of interferon alpha, beta, and gamma and their combinations on human melanoma cells in vitro: changes of proliferation, melanin synthesis, and immunophenotype *J Invest Dermatol.* **95(6 Suppl)**, 231S-237S (1990)
4. Chelbi-Alix M. K., and Wietzerbin, J., Interferon, a growing cytokine family: 50 years of interferon research, *Biochimie*, **89**, 713-718 (2007).

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