

**Synonym**

IFN-alpha 1,IFNA1,IFNalpha 1,IFN-alpha-1,LeIF D

**Source**

Human IFN-alpha 1, His Tag (IFA-H52H9) is expressed from human 293 cells (HEK293). It contains AA Cys 24 - Glu 189 (Accession # [P01562-1](#)).

Predicted N-terminus: Cys 24

**Molecular Characterization**

IFNA1(Cys 24 - Glu 189)  
P01562-1 Poly-his

This protein carries a polyhistidine tag at the C-terminus.

The protein has a calculated MW of 21.3 kDa. The protein migrates as 22-24 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

**Endotoxin**

Less than 1.0 EU per µg by the LAL method.

**Purity**

>95% as determined by SDS-PAGE.

**Formulation**

Lyophilized from 0.22 µm filtered solution in PBS, pH7.4. Normally trehalose is added as protectant before lyophilization.

Contact us for customized product form or formulation.

**Reconstitution**

Please see Certificate of Analysis for specific instructions.

*For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.*

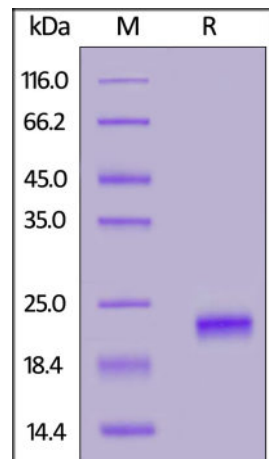
**Storage**

For long term storage, the product should be stored at lyophilized state at -20°C or lower.

*Please avoid repeated freeze-thaw cycles.*

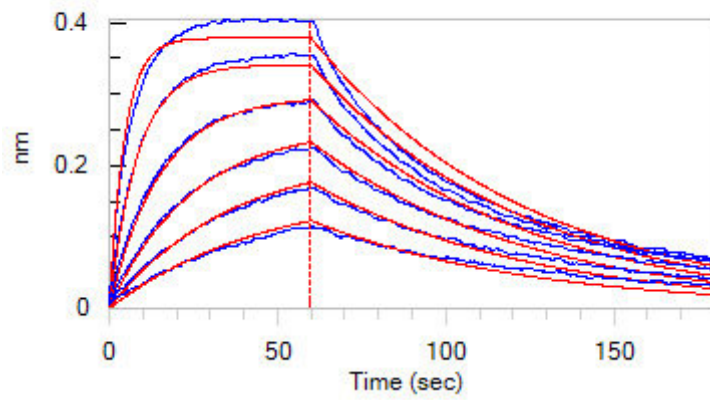
This product is stable after storage at:

- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

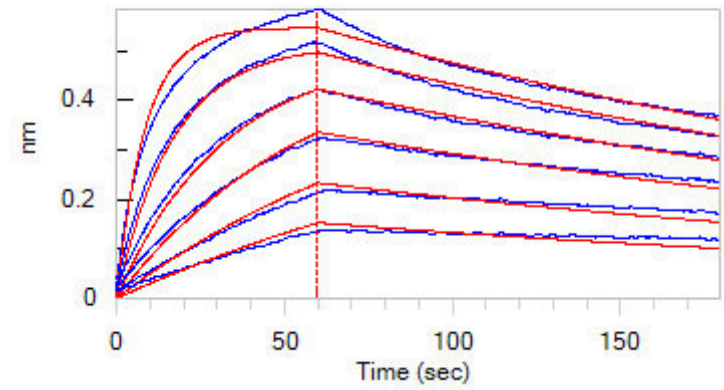
**SDS-PAGE**

Human IFN-alpha 1, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 95%.

**Bioactivity-BLI**



Loaded Human IFN-alpha 1, His Tag (Cat. No. IFA-H52H9) on HIS1K Biosensor, can bind Human IFNAR1, Fc Tag (Cat. No. IF1-H5253) with an affinity constant of  $0.191 \mu\text{M}$  as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).



Loaded Human IFN-alpha 1, His Tag (Cat. No. IFA-H52H9) on HIS1K Biosensor, can bind Human IFNAR2, Fc Tag (Cat. No. IF2-H5255) with an affinity constant of  $19.5 \text{ nM}$  as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).

## Background

Interferon alpha-1 is also known as IFN-alpha-1/13, Interferon alpha-D, LeIF D and IFNA1, belongs to the alpha / beta interferon family. Interferons alpha-1 and alpha-13 have identical protein sequences. Produced by macrophages, IFN-alpha have antiviral activities. Interferon stimulates the production of two enzymes: a protein kinase and an oligoadenylate synthetase. IFN-alpha can either suppress or promote the development of autoimmune diabetes. It is likely that IFN-alpha plays a complex role in the etiology of type 1 diabetes.

## Clinical and Translational Updates

Please contact us via [TechSupport@acrobiosystems.com](mailto:TechSupport@acrobiosystems.com) if you have any question on this product.