

## Synonym

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

#### Source

Human IFN-alpha 1, Fc Tag(IFA-H5258) 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) Fc(Pro 100 - Lys 330) P01562-1 P01857

This protein carries a human IgG1 Fc tag at the C-terminus.

The protein has a calculated MW of 45.8 kDa. The protein migrates as 45-50 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.

>90% as determined by SEC-MALS.

## **Formulation**

Lyophilized from 0.22 µm filtered solution in 50 mM Tris, 100 mM Glycine, 150 mM NaCl, pH7.5 with trehalose as protectant.

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

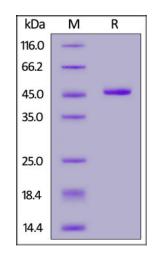
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

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.

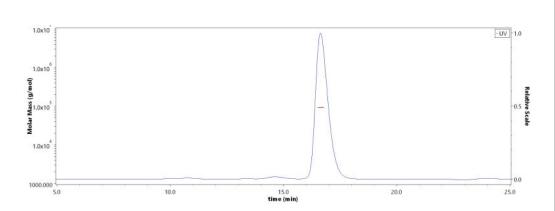
## **SDS-PAGE**



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

## **Bioactivity-BLI**

## **SEC-MALS**



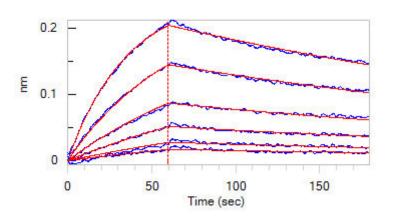
The purity of Human IFN-alpha 1, Fc Tag (Cat. No. IFA-H5258) is more than 90% and the molecular weight of this protein is around 90-118 kDa verified by SEC-MALS.

Report

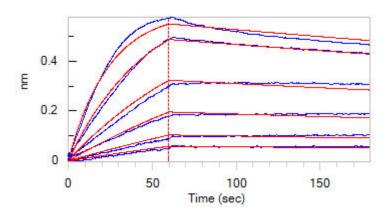
# **Human IFN-alpha 1 Protein, Fc Tag (MALS verified)**

Catalog # IFA-H5258





Loaded Human IFN-alpha / beta R1, His Tag (Cat. No. IF1-H5225) on NTA Biosensor, can bind Human IFN-alpha 1, Fc Tag (Cat. No. IFA-H5258) with an affinity constant of 11.3 nM as determined in BLI assay (ForteBio Octet Red96e) (QC tested).



Loaded Human IFNAR2, His Tag (Cat. No. IF2-H5224) on HIS1K Biosensor, can bind Human IFN-alpha 1, Fc Tag (Cat. No. IFA-H5258) with an affinity constant of 2.67 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**