

# Human IFN alpha 1 Protein

Cat. No. IFN-HM2A1

## Description

<b>Source</b>	Recombinant Human IFN alpha 1 Protein is expressed from HEK293 with hFc tag at the C-Terminus. It contains Cys24-Glu189.
<b>Accession</b>	P01562
<b>Molecular Weight</b>	The protein has a predicted MW of 46.14 kDa. Due to glycosylation, the protein migrates to 48-55 kDa based on Tris-Bis PAGE result.
<b>Endotoxin</b>	Less than 1EU per µg by the LAL method.
<b>Purity</b>	> 95% as determined by Tris-Bis PAGE > 95% as determined by HPLC

## Formulation and Storage

<b>Formulation</b>	Lyophilized from 0.22µm filtered solution in PBS (pH 7.4). Normally 8% trehalose is added as protectant before lyophilization.
<b>Reconstitution</b>	Centrifuge the tube before opening. Reconstituting to a concentration more than 100 µg/ml is recommended. Dissolve the lyophilized protein in distilled water.
<b>Storage</b>	-20 to -80°C for 12 months as supplied from date of receipt. -20 to -80°C for 3-6 months in unopened state after reconstitution. 2-8°C for 2-7 days after reconstitution. Recommend to aliquot the protein into smaller quantities for optimal storage. Please minimize freeze-thaw cycles.

## Background

IFN- $\alpha$ , a cytokine expressed in human islets from individuals affected by type 1 diabetes, plays a key role in the pathogenesis of diabetes by upregulating inflammation, endoplasmic reticulum (ER) stress and MHC class I overexpression, three hallmarks of islet histology in early type 1 diabetes.

## Assay Data

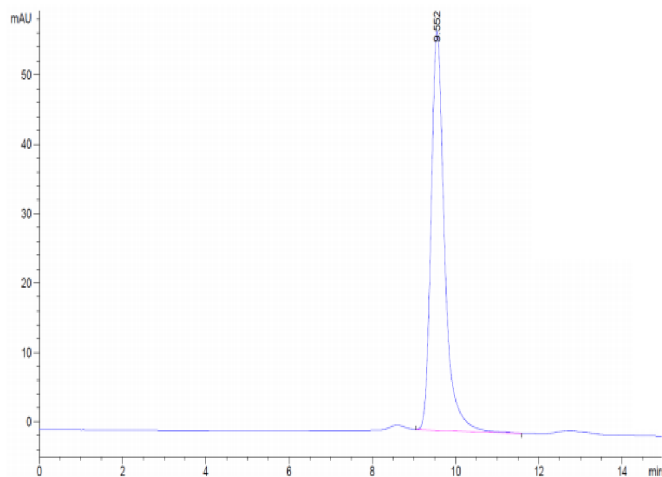
### Tris-Bis PAGE



Human IFN alpha 1 on Tris-Bis PAGE under reduced condition. The purity is greater than 95%.

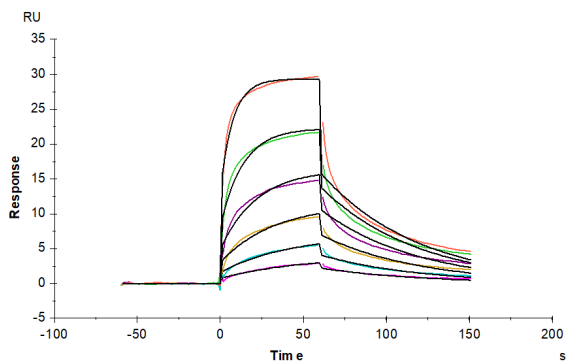
### SEC-HPLC

Assay Data

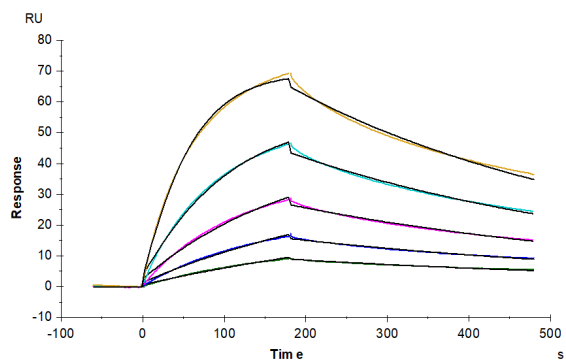


The purity of Human IFN alpha 1 is greater than 95% as determined by SEC-HPLC.

SPR Data



Human IFN alpha/beta R1, His Tag captured on CM5 Chip via anti-his antibody can bind Human IFN alpha 1, hFc Tag with an affinity constant of 0.12  $\mu$ M as determined in SPR assay (Biacore T200).



Human IFN alpha/beta R2, His Tag captured on CM5 Chip via anti-his antibody can bind Human IFN alpha 1, hFc Tag with an affinity constant of 11.90 nM as determined in SPR assay (Biacore T200) (QC Test).