Human IFN-gamma / IFNG Protein, premium grade

Catalog # IFG-H4211

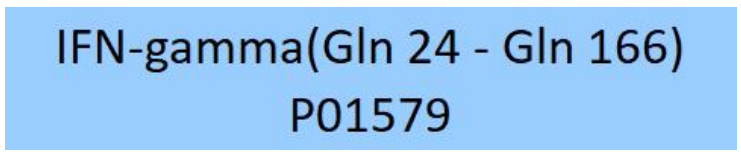
Synonym

Interferon-gamma ,Interferon-γ

Source

Human IFN-gamma, premium grade(IFG-H4211) is expressed from human 293 cells (HEK293). It contains AA Gln 24 - Gln 166 (Accession # P01579).
Predicted N-terminus: Gln 24
It is produced under our rigorous quality control system that incorporates a comprehensive set of tests including sterility and endotoxin tests. Product performance is carefully validated and tested for compatibility for cell culture use or any other applications in the early preclinical stage. When ready to transition into later clinical phases, we also offer a custom GMP protein service that tailors to your needs. We will work with you to customize and develop a GMP-grade product in accordance with your requests that also meets the requirements for raw and ancillary materials use in cell manufacturing of cell-based therapies.

Molecular Characterization



This protein carries no "tag".

The protein has a calculated MW of 16.8 kDa. The protein migrates as 15 kDa, 19 kDa and 24 kDa±3 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

Endotoxin

Less than 0.01 EU per μg by the LAL method.

Host Cell Protein

<0.5 ng/μg of protein tested by ELISA.

Host Cell DNA

<0.02 ng/μg of protein tested by qPCR.

Sterility

Negative

Mycoplasma

Negative.

Purity

>95% as determined by SDS-PAGE.

>90% as determined by SEC-MALS.

Formulation

Lyophilized from 0.22 μm filtered solution in PBS, pH7.4 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

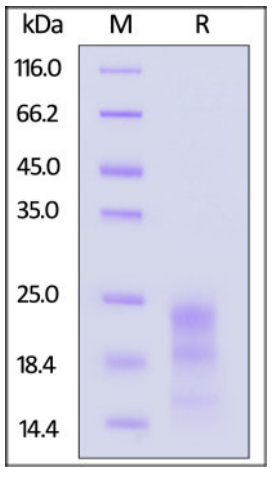
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

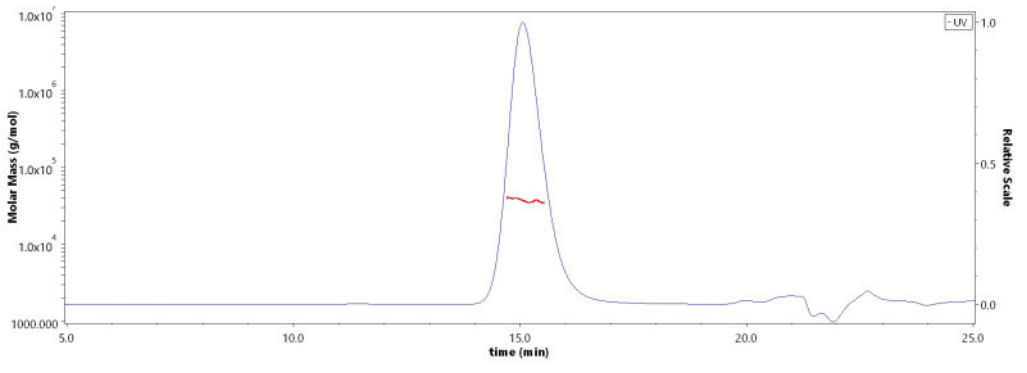
This product is stable after storage at:

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

SDS-PAGE



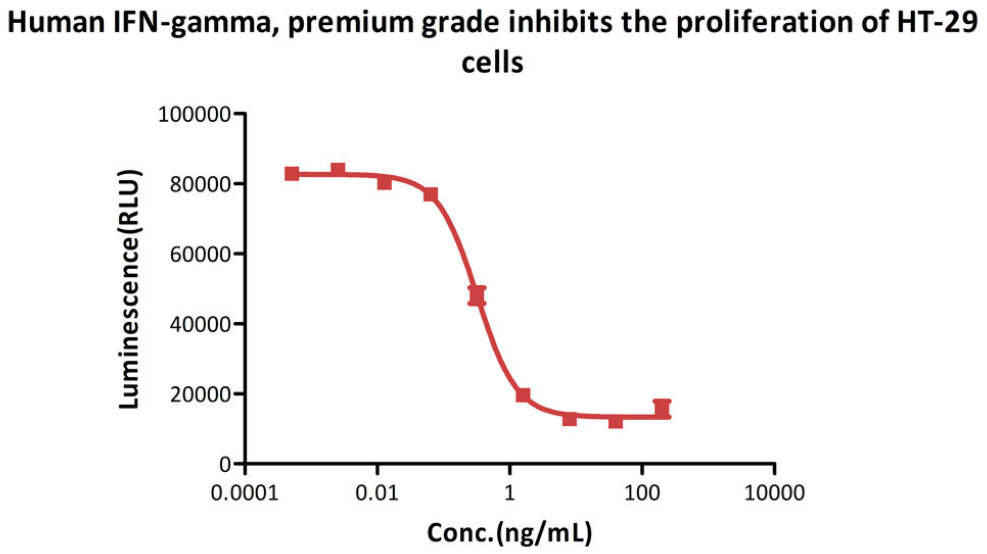
SEC-MALS



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

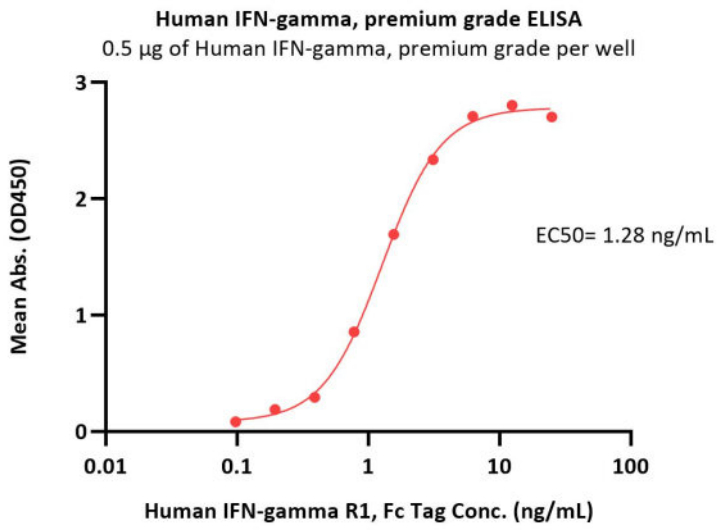
The purity of Human IFN-gamma, premium grade (Cat. No. IFG-H4211) is more than 90% and the molecular weight of this protein is around 34-44 kDa verified by SEC-MALS.
Report

Bioactivity-Bioactivity CELL BASE



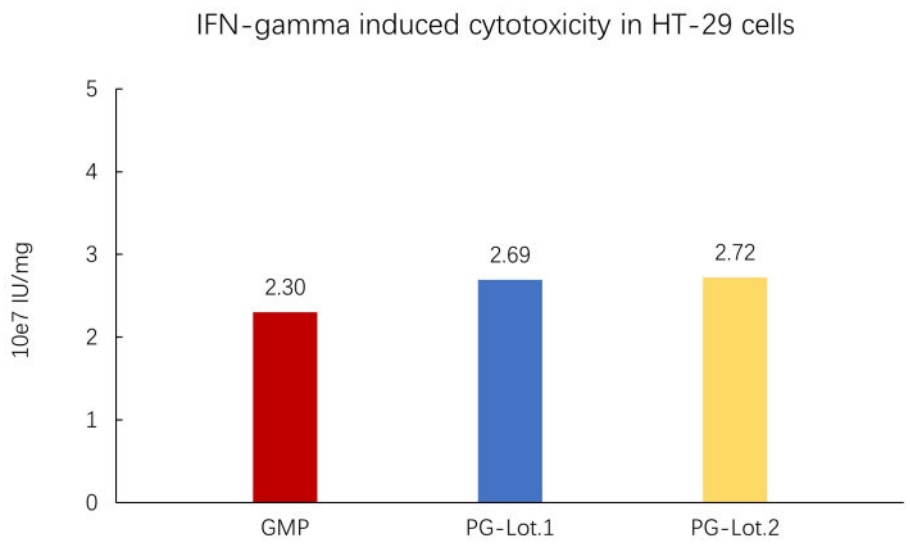
Human IFN-gamma, premium grade (Cat. No. IFG-H4211) inhibits the proliferation of HT-29 cells. The specific activity of Human IFN-gamma, premium grade is > 2.00×10^7 IU/mg, which is calibrated against human interferon gamma Standard (NIBSC code: 87/586) (QC tested).

Bioactivity-ELISA



Immobilized Human IFN-gamma, premium grade (Cat. No. IFG-H4211) at 5 μg/mL (100 μL/well) can bind Human IFN-gamma R1, Fc Tag (Cat. No. IF1-H5254) with a linear range of 0.1-2 ng/mL (QC tested).

Bioactivity-Stability



The Cell based assay shows batch-to-batch consistency between Acro's GMP and PG IFN-gamma.

Background

Interferon-gamma (IFN-γ/IFNG) is a dimerized soluble cytokine that is the only member of the type II class of interferon. This interferon was originally called macrophage-activating factor, a term now used to describe a larger family of proteins to which IFN-γ belongs. IFN-gamma has been used in a wide variety of clinical indications. Interferon-gamma (IFNgamma) is a central regulator of the immune response and signals via the Janus Activated Kinase (JAK)-Signal Transducer and Activator of Transcription (STAT) pathway. Interferon gamma has broader roles in activation of innate and adaptive immune responses to viruses and tumors, in part through upregulating transcription of genes involved in cell cycle regulation, apoptosis, and antigen processing/presentation. Despite this, rodent and human trophoblast cells show dampened responses to IFNG that reflect the resistance of these cells to IFNG-mediated activation of major histocompatibility complex (MHC) class II transplantation antigen expression.

Clinical and Translational Updates