Human IFN-gamma, C-His Tag Protein

HA210762

Product name:	Human IFN-gamma, C-His Tag
Species reactivity:	Human
Bio-Activity:	Measured in a cytotoxicity assay using HT-29 human colon cancer cells. The ED50 for this effect is 0.05-0.25 ng/mL
Protein construction description:	A DNA sequence encoding the human IFN-gamma protein (P01579) (Gln 24-Gly 161) was expressed with a His tag at the C-terminus.

Background: Type II interferon produced by immune cells such as T-cells and NK cells that plays crucial roles in antimicrobial, antiviral, and antitumor responses by activating effector immune cells and enhancing antigen presentation. Primarily signals through the JAK-STAT pathway after interaction with its receptor IFNGR1 to affect gene regulation. Upon IFNG binding, IFNGR1 intracellular domain opens out to allow association of downstream signaling components JAK2, JAK1 and STAT1, leading to STAT1 activation, nuclear translocation and transcription of IFNG-regulated genes. Many of the induced genes are transcription factors such as IRF1 that are able to further drive regulation of a next wave of transcription. Plays a role in class I antigen presentation pathway by inducing a replacement of catalytic proteasome subunits with immunoproteasome subunits. In turn, increases the quantity, quality, and repertoire of peptides for class I MHC loading. Increases the efficiency of peptide generation also by inducing the expression of activator PA28 that associates with the proteasome and alters its proteolytic cleavage preference. Up-regulates as well MHC II complexes on the cell surface by promoting expression of several key molecules such as cathepsins B/CTSB, H/CTSH, and L/CTSL. Participates in the regulation of hematopoietic stem cells during development and under homeostatic conditions by affecting their development, quiescence, and differentiation.

Purity:	>95% as determined by SDS-PAGE.
Endotoxin:	Less than 1.0 EU per μg by the LAL method.
Fragment region:	IFN-gamma (24-161)
Source:	HEK293
Accession:	P01579
Predicted molecular mass:	17.6 kD
Formulation:	Lyophilized from a 0.2 μm filtered solution of PBS, pH7.4, 5% Trehalose, 5% mannitol.
Reconstitution:	Reconstitute at 250 μg/ml in sterile water.
Storage:	Please avoid repeated freeze-thaw cycles. Samples are stable for up to twelve months from date of receipt at -20℃ to -80℃ It is recommended that aliquot the reconstituted solution to minimize freeze-thaw cycles.

Images

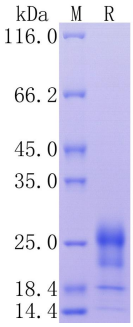

Fig1: Protein on SDS-PAGE under reducing (R) condition.

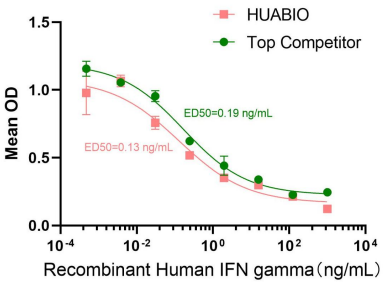

Fig2: Measured in a cytotoxicity assay using HT-29 human colon cancer cells. The ED_{50} for this effect is 0.05-0.25 ng/mL

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".