IFN-gamma Protein, Mouse (HEK293, Fc)

Cat. No.:	HY-P73252
Synonyms:	IFG; IFI; IFNG; IFN-gamma; Immune interferon; Interferon gamma
Species:	Mouse
Source:	HEK293
Accession:	P01580 (H23-C155)
Gene ID:	15978
Molecular Weight:	Approximately 55 kDa

PROPERTIES

Biological Activity	1. Measured in antiviral assays using L929 cells infected with vesicular stomatitisvirus (VSV). The ED_{50} for this effect is 2-15 ng/mL. 2. Measured by its ability to bind with recombinant mouse IFNGR1-His in a functional ELISA.
Appearance	Solution
Formulation	Supplied as a 0.22 μm filtered solution of PBS, pH 7.4
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	N/A.
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice

DESCRIPTION

Background	IFN-gamma is produced by immune cells such as T cells and NK cells, and plays a key role in antibacterial, antiviral, and antitumor responses by activating effector immune cells and enhancing antigen presentation[1][2][5][6].FN-gamma is involved in the regulation of hematopoietic stem cells under developmental and steady-state conditions by affecting their development, quiescence, and differentiation[3][4].IFN-gamma increases the susceptibility of cancer cells to external and internal apoptosis pathways by regulating the expression of Fas/FasL, TNF-related apoptosis-inducing ligand (TRAIL), caspase-8, -3, -7, and -1, survivin, and Bim[5].IFN-gamma mainly interacts with its receptor IFNGR1 through the JAK-STAT pathway to affect gene regulation. After binding to the receptor, the intracellular domain of IFNGR1 opens, allowing downstream signaling elements JAK2, JAK1, and STAT1 to bind, resulting in STAT1 activation, nuclear translocation, and IFN-gamma-regulated gene transcription[6].IFN-gamma achieves antiviral effects by inducing RNA-activated protein kinase R (PKR) and adenosine deaminase RNA-specific-1 (ADAR-1) to activate antiviral proteins[6].IFN-gamma can inhibit the production of IL-4 by TH1 cells and maintain the sustained expression of T-bet[7].As a central effector of cell-mediated immunity, IFN-gamma can enhance antigen recognition through interactions with homologous T cells, amplify antigen

presentation through antigen-presenting cells (APCs), increase the production of reactive oxygen species (ROS) and reactive nitrogen intermediates (RNIs), and induce antiviral responses[8].

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