IFN-gamma R1/CD119 Protein, Human (HEK293, His, solution)

Cat. No.:	HY-P72612
Synonyms:	Interferon gamma receptor 1; IFN-gamma-R1; IFN-gamma-R-alpha; CD119; Ifngr1
Species:	Human
Source:	HEK293
Accession:	P15260 (E18-G245)
Gene ID:	3459
Molecular Weight:	40-50 kDa

PROPERTIES

AA Sequence	E M G T A D L G P S S V P T P T N V T I E S Y N M N P I V Y W E Y Q I M P Q V P V F T V E V K N Y G V K N S E W I D A C I N I S H H Y C N I S D H V G D P S N S L W V R V K A R V G Q K E S A Y A K S E E F A V C R D G K I G P P K L D I R K E E K Q I M I D I F H P S V F V N G D E Q E V D Y D P E T T C Y I R V Y N V Y V R M N G S E I Q Y K I L T Q K E D D C D E I Q C Q L A I P V S S L N S Q Y C V S A E G V L H V W G V T T E K S K E V C I T I F N S S I K G
Appearance	Solution.
Formulation	Supplied as a 0.2 μm filtered solution of 20 mM PB,150 mM NaCl, 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 R1 (CD119), one of the subunit of IFN-gamma receptor, is a receptor for IFN-gamma. IFN-gamma R1 is constitutively expressed on the surface of almost all cells[1]. IFN-gamma R1 can associate with IFN-gamma R2 to form a functional receptor. Upon binding with IFN-gamma, IFNγR1 and IFNγR2 oligomerize and transphosphorylate[1]. Then, JAK1 and JAK2 are phosphorylated and activated, and STAT1 is recruited to the receptor complex. The phosphorylation of IFNγR1 creates a docking site for STAT1 and leads to the phosphorylation of STAT1. Phosphorylated STAT1 translocates to the nucleus, where it regulates the expression of IFN-responsive genes (e.g. CD54). Mutations in the gene IFNGR1 which encodes the IFN-gamma R1 cause a primary

immunodeficiency and leads to mycobacterial infection, such as Mendelian susceptibility to mycobacterial disease (MSMD) [2]

Human IFN-gamma R1 consists of extracellular domain (E18-G245), helical domain (S246-I266), and cytoplasmic domain (C267-S489). The sequence of amino acids in IFNAR1 differs in different species. Human IFN-gamma R1 shares 50% aa sequence identity with mouse.IFN-gamma R1 plays a critical role in antimicrobial, antiviral, and antitumor responses[2].

REFERENCES

[1]. Castro F, et al. Interferon-Gamma at the Crossroads of Tumor Immune Surveillance or Evasion. Front Immunol. 2018 May 4;9:847.

[2]. van de Vosse E, et al. IFN-γR1 defects: Mutation update and description of the IFNGR1 variation database. Hum Mutat. 2017 Oct;38(10):1286-1296.

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