IFN-gamma R1/CD119 Protein, Mouse (HEK293, Fc)

Cat. No.:	HY-P73133
Synonyms:	Interferon gamma receptor 1; IFN-gamma-R1; CD119; Ifngr1; Ifngr
Species:	Mouse
Source:	HEK293
Accession:	P15261 (M1-D253)
Gene ID:	15979
Molecular Weight:	70-75 kDa

PROPERTIES

Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of PBS, pH 7.4. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

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). IFN-gamma R1 deficiencies are associated with immune responses mediated by IFN-γ, and increased susceptibility to infections. IFN-gamma R1 signaling pathway is important in activating cancer cell death and inhibiting cancer progression[3] Mouse IFN-gamma R1 consists of extracellular domain (A26-S254), helical domain (I255-Y275), and cytoplasmic domain (W276-S477). The sequence of amino acids in IFNAR1 differs in different species. Mouse IFN-gamma R1 shares 50% aa sequence identity with human.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.

[3]. Ding H, et al. Role of interferon-gamma (IFN-γ) and IFN-γ receptor 1/2 (IFNγR1/2) in regulation of immunity, infection, and cancer development: IFN-γ-dependent or independent pathway. Biomed Pharmacother. 2022 Nov;155:113683.

[4]. Goto Y, et al. Contribution of the exosome-associated form of secreted endoplasmic reticulum aminopeptidase 1 to exosome-mediated macrophage activation. Biochim Biophys Acta Mol Cell Res. 2018 Jun;1865(6):874-888.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA