

## IFN-gamma R1/CD119 Protein, Human (HEK293, hFc)

|                   |  |
|-------------------|--|
| Cat. No.:         | HY-P74855  |
| Synonyms:         | Interferon gamma receptor 1; IFN-gamma-R1; CD119; Ifngr1 |
| Species:          | Human  |
| Source:           | HEK293   |
| Accession:        | P15260/AAH05333 (E18-G245)                               |
| Gene ID:          | 3459   |
| Molecular Weight: | 60-75 kDa  |

### PROPERTIES

|                                |  |
|--------------------------------|--|
| <b>Biological Activity</b>     | Immobilized Human Human IFN gamma, His Tag at 2µg/ml (100µl/well) on the plate. Dose response curve for Human IFN gamma R1, hFc Tag with the EC <sub>50</sub> of 32.7ng/ml determined by ELISA.            |
| <b>Appearance</b>              | Lyophilized powder   |
| <b>Formulation</b>             | 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.  |
| <b>Endotoxin Level</b>         | <1 EU/µg, determined by LAL method.  |
| <b>Reconstitution</b>          | It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH <sub>2</sub> O.  |
| <b>Storage &amp; Stability</b> | 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. |
| <b>Shipping</b>                | Room temperature in continental US; may vary elsewhere.  |

### DESCRIPTION

|                   |  |
|-------------------|--|
| <b>Background</b> | <p>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<sup>[1]</sup>.</p> <p>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<sup>[1]</sup>. 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]</p> <p>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<sup>[2]</sup>.</p> |
|-------------------|--|

---

## 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- $\gamma$ R1 defects: Mutation update and description of the IFNGR1 variation database. *Hum Mutat*. 2017 Oct;38(10):1286-1296.
- 

**Caution: Product has not been fully validated for medical applications. For research use only.**

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: [tech@MedChemExpress.com](mailto:tech@MedChemExpress.com)

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