

PRODUCT INFORMATION



IFNAR1 (human, recombinant)

Item No. 42748

Overview and Properties

Synonyms: CRF2 member 1, CRF2-1, Cytokine Receptor Class-II Member 1, Cytokine Receptor Family 2 Member 1, Interferon Alpha/Beta Receptor 1, Interferon α/β Receptor 1, Type I IFN Receptor 1, Type I Interferon Receptor

Source: Recombinant human C-terminal His-tagged IFNAR1 expressed in Expi293F™ cells

Amino Acids: 28-436

Uniprot No.: P17181

Molecular Weight: 50.1 kDa

Storage: -80°C (as supplied); avoid repeated freeze/thaw cycles

Stability: ≥ 1 year

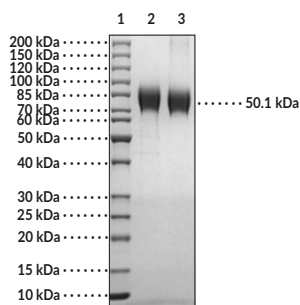
Supplied in: 20 mM HEPES, pH 7.0, 200 mM sodium chloride, 10% glycerol, and 1 mM DTT

Protein Concentration: *batch specific* mg/ml

Special Conditions: Rapid thaw with running water.

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Image



Lane 1: MW Markers
Lane 2: IFNAR1 (2 µg, reduced)
Lane 3: IFNAR1 (2 µg, non-reduced)

SDS-PAGE Analysis of IFNAR1. This protein has a calculated molecular weight of 50.1 kDa. It has an apparent molecular weight of approximately 70-90 kDa by SDS-PAGE under reducing conditions due to glycosylation.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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Description

IFN α/β receptor 1 (IFNAR1), also known as type I IFN receptor 1, is a class II helical cytokine receptor involved in the antiviral response.¹ It is composed of an extracellular domain, which contains four fibronectin type III subdomains, a transmembrane domain, and an intracellular domain, which contains a tyrosine kinase 2 (TYK2) phosphorylation site, and forms a heterodimer with IFNAR2.² It is ubiquitously expressed and binds to type I IFNs, including IFN- α , IFN- β , and IFN- ω , which, upon binding, together with IFNAR2 signal through JAK1, TYK2, and various STATs.³ Knockout of *Ifnar1* sensitizes fibroblasts to severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection *in vitro* and has commonly been used as an immunosuppressive model to study viral infections *in vivo*.^{4,5} SNPs in *IFNAR1* are associated with increased risk of viral infections, lung cancer, multiple sclerosis, and cerebral malaria, as well as adverse reactions to vaccinations.¹ Cayman's IFNAR1 (human, recombinant) protein consists of 409 amino acids and has a calculated molecular weight of 50.1 kDa. As a result of glycosylation, the monomer migrates at approximately 70-90 kDa by SDS-PAGE under reducing conditions.

References

1. de Weerd, N.A., Vivian, J.P., Lim, S.S., *et al.* Structural integrity with functional plasticity: What type I IFN receptor polymorphisms reveal. *J. Leukoc. Biol.* **108**(3), 909-924 (2020).
2. Borden, E.C., Sen, G.C., Uze, G., *et al.* Interferons at age 50: Past, current and future impact on biomedicine. *Nat. Rev. Drug Discov.* **6**(12), 975-990 (2007).
3. de Weerd, N.A. and Nguyen, T. The interferons and their receptors - distribution and regulation. *Immunol. Cell Biol.* **90**(5), 483-491 (2012).
4. Zhang, Q., Bastard, P., Liu, Z., *et al.* Inborn errors of type I IFN immunity in patients with life-threatening COVID-19. *Science* **370**(6515), eabd4570 (2020).
5. Marín-Lopez, A., Calvo-Pinilla, E., Moreno, S., *et al.* Modeling arboviral infection in mice lacking the interferon alpha/beta receptor. *Viruses* **11**(1), 35 (2019).

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