

IFN-alpha/beta R2 Protein, Human (HEK293, His, solution)

Cat. No.:	HY-P74862A
Synonyms:	Interferon alpha/beta receptor 2; IFN-R-2; Interferon alpha binding protein; IFNAR2; IFNABR; IFNARB
Species:	Human
Source:	HEK293
Accession:	P48551 (I27-K243)
Gene ID:	3455
Molecular Weight:	Approximately 45 kDa

PROPERTIES

Biological Activity	Measured by its ability to inhibit rh IFN β mediated protection of WISH Human amnion cells infected with vesicular stomatitis virus (VSV) to viral lysis and the EC ₅₀ is typically <4 μ g/mL.
Appearance	Solution.
Formulation	Supplied as a 0.2 μ m filtered solution of PBS, pH 7.4.
Endotoxin Level	<1 EU/ μ g, determined by LAL method.
Reconstitution	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	<p>The IFN-alpha/beta R2 protein, in conjunction with IFNAR1, constitutes the heterodimeric receptor responsible for recognizing type I interferons, including interferons alpha, beta, epsilon, omega, and kappa. Upon type I interferon binding, the IFNAR1 and IFNAR2 subunits are brought into close proximity, facilitating the activation of Janus kinases (JAKs) associated with each subunit (TYK2 bound to IFNAR1 and JAK1 bound to IFNAR2). This activation involves cross-phosphorylation of the JAKs, which, in turn, phosphorylate specific tyrosine residues on the intracellular domains of IFNAR1 and IFNAR2. These phosphorylated sites serve as docking sites for STAT transcription factors (STAT1, STAT2, and STAT3), initiating a signaling cascade that results in the translocation of STAT proteins into the nucleus. The translocated STAT proteins regulate the expression of interferon-regulated genes, contributing to the interferon response. Mechanistically, IFN-alpha/beta R2 acts as a potent inhibitor of type I IFN receptor activity, modulating the downstream effects of interferon signaling.</p>
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Caution: Product has not been fully validated for medical applications. For research use only.

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