

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

Cat. No.:	HY-P78772
Synonyms:	IFNAR2; IFNARB; IFNABR; IFN-R-2; IFN-alpha; beta receptor 2
Species:	Mouse
Source:	HEK293
Accession:	O35664-1 (S22-A242)
Gene ID:	15976
Molecular Weight:	Approximately 37-57 kDa

PROPERTIES

AA Sequence	<pre> S L E T I T P S A F D G Y P D E P C T I N I T I R N S R L I L S W E L E N K S G P P A N Y T L W Y T V M S K D E N L T K V K N C S D T T K S S C D V T D K W L E G M E S Y V V A I V I V H R G D L T V C R C S D Y I V P A N A P L E P P E F E I V G F T D H I N V T M E F P P V T S K I I Q E K M K T T P F V I K E Q I G D S V R K K H E P K V N N V T G N F T F V L R D L L P K T N Y C V S L Y F D D D P A I K S P L K C I V L Q P G Q E S G L S E S A </pre>
Biological Activity	Immobilized Mouse IFNA2 at 10 µg/mL (100 µL/well) can bind IFNAR2. The ED50 for this effect is 126.3 ng/mL.
Appearance	Lyophilized powder.
Formulation	Lyophilized a 0.22 µm filtered solution of PBS, pH 7.4.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
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	The IFN-alpha/beta R2 Protein, in conjunction with IFNAR1, constitutes the heterodimeric receptor for type I interferons, encompassing interferons alpha, beta, epsilon, omega, and kappa. Upon type I interferon binding, the receptor activation initiates the JAK-STAT signaling cascade, leading to the transcriptional activation or repression of interferon-regulated genes that mediate the interferon response. Mechanistically, the binding of type I interferon brings IFNAR1 and IFNAR2 into
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close proximity, facilitating cross-phosphorylation of their associated Janus kinases (JAKs), with TYK2 bound to IFNAR1 and JAK1 bound to IFNAR2. The activated JAKs then phosphorylate specific tyrosine residues on the intracellular domains of IFNAR1 and IFNAR2, creating docking sites for STAT transcription factors (STAT1, STAT2, and STAT3). These phosphorylated STAT proteins translocate into the nucleus, regulating the expression of interferon-regulated genes. Additionally, IFN-alpha/beta R2 proteins may function as potent inhibitors of type I interferon receptor activity, showcasing their role in modulating the interferon signaling pathway.

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

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