

IL-10R beta Protein, Rat (HEK293, Fc)

Cat. No.:	HY-P76414
Synonyms:	Interleukin-10 receptor subunit beta; IL-10RB; CRF2-4; IL-10R2; CDw210b
Species:	Rat
Source:	HEK293
Accession:	NP_001100581.1 (M22-P222)
Gene ID:	304091
Molecular Weight:	Approximately 68 kDa.

PROPERTIES

AA Sequence	<pre> M I P P P E N V R M N S V N F K N I L Q W E V P A F P K E N L T F T A Q Y E S Y W Y F Q D R C K N T A S T H C D F S V L S K Y G D H T V R V R T E L A D E H S E W V N V T F C P V E D T I I G P P E M Q T E S L A D S I H M R F S A P Q I E N E P E T W T M K N I Y N S W A Y R V Q Y W K N G T K E K F Q V T S Q Y D S E V L R D L E P W T T Y C I Q V Q G F L L D Q N R T G E W S K P V C E R T T S D E T T P P </pre>
Appearance	Lyophilized powder
Formulation	Lyophilized from a 0.2 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 PBS, pH 7.4. 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	<p>IL-10 receptor complex consists of a heterodimer of four transmembrane chains, two of which form IL-10R alpha and two of which form IL-10R beta. IL-10R beta, originally known as the orphan receptor CRF2-4, is an essential accessory subunit for the active interleukin 10 receptor complex^[1].</p> <p>IL-10R beta can bind to IL-10 via the JAK-STAT pathway, and activation of the IL-10 receptor complex leads to phosphorylation of the receptor-associated proteins TYK and JAK-1, and ultimately to activation of the transcription factors STAT3, STAT1, and STAT5, which regulate the expression of IL-10-responsive genes, including c-myc, bcl-2, and bcl-xL,</p>
-------------------	--

initiating signal transduction^[2].

IL-10R beta is expressed on most cell types and is also a shared cell surface receptor required for the activation of five class II cytokines (IL-10, IL-22, IL-26, IL-28 and IFNL1), which play a key role in host defense, immune regulation. Among them, the IFNLR1/IL10R beta dimer is the receptor for the cytokine ligands IFNL2 and IFNL3 and mediates their antiviral activity^[3].

REFERENCES

[1]. Sung-Il Yoon, et al. Structure and mechanism of receptor sharing by the IL-10R2 common chain. *Structure*. 2010 May 12;18(5):638-48.

[2]. J Shi, et al. IL10 inhibits starvation-induced autophagy in hypertrophic scar fibroblasts via cross talk between the IL10-IL10R-STAT3 and IL10-AKT-mTOR pathways. *Cell Death Dis*. 2016 Mar 10;7(3):e2133.

[3]. Paul Sheppard, et al. IL-28, IL-29 and their class II cytokine receptor IL-28R. *Nat Immunol*. 2003 Jan;4(1):63-8.

[4]. Jianyong Fan, et al. The expression of β -Defensin-2, IL-22, IL-22R1 and IL-10R2 in rat model of Klebsiella pneumonia and their correlation with histological grades. *Exp Lung Res*. 2020 May-Jun;46(5):109-116.

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

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