IL-10R beta Protein, Human (HEK293, His-hFc)

Cat. No.:	HY-P74839
Synonyms:	Interleukin-10 receptor subunit beta; IL-10RB; CRF2-4; IL-10R2; CDw210b
Species:	Human
Source:	HEK293
Accession:	Q08334 (M1-S220)
Gene ID:	3588
Molecular Weight:	75-85 kDa

PROPERTIES

Appearance	Lyophilized powder.
Formulation	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.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O.
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	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]. 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, 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]. L. Zhou, et al. Activation of toll-like receptor-3 induces interferon-lambda expression in human neuronal cells. Neuroscience. 2009 Mar 17;159(2):629-37.

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