

IL-17RB Protein, Mouse (269a.a, HEK293, His)

Cat. No.:	HY-P72582
Synonyms:	Interleukin-17 receptor B; IL-17RB; IL-17Rh1; IL-17B receptor; CRL4; EVI27
Species:	Mouse
Source:	HEK293
Accession:	Q9JIP3 (R18-G286)
Gene ID:	50905
Molecular Weight:	38-45 kDa

PROPERTIES

AA Sequence	REPTIQCGSE TGPSPPEWMVQ HTLTPGDLRD LQVELVKTSV AAEEFSILMN ISWILRADAS IRLLKATKIC VSGKNNMNSY SCVRCNYTEA FQSQTRPSGG KWTFSYVGFP VELSTLYLIS AHNIPNANMN EDSPSLSVNF TSPGCLNHVM KYKKQCTEAG SLWDPDITAC KKNEKMVEVN FTTNPLGNRY TILIQRD TTL GFSRVLENKL MRTSVAIPVT EESEGA VVQL TPYLHTCGND CIRREGTVVL CSETSAPIPP DDNRRLGG
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 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	<p>IL-17RB (Interleukin 17 receptor B), a 47.9 kDa transmembrane protein (462 aa) that belongs to the IL-17 receptor family, and can be activated by IL-17B. It has been proved to be involved in inflammatory diseases and cancers. IL-17RB is expressed in various endocrine tissues and in epithelial cells in different organs such as kidney and liver and mucosal tissues [1][2][3].</p> <p>The amino acid sequence of human IL-17RB protein has low homology with mouse IL-17B protein.</p>
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IL-17RB has a SEFIR cytoplasmic domain implicated in homotypic dimerization and recruitment of signaling proteins (shared with IL-17RA) and a TRAF6-binding domain (not found in IL-17RA). IL-17B shares its receptor IL-17RB with IL-17E (also known as IL-25) that binds to the heterodimeric IL-17RA/IL-17RB complex. The binding affinity (KD) of IL-17B for IL-17RB is around 30-fold lower than that of IL-17E. It does not bind IL-17, IL-17C and IL-17F. Interleukin-17 (IL-17) plays a pivotal role in inflammatory diseases and cancers. IL-17 acts its role through IL-17 receptor (IL-17R). The IL-17R family are single transmembrane proteins that include the subtype receptors of IL-17RA to IL-17RE. Upon ligand binding, IL-17RB activates the canonical NK- κ B pathway as well as ERK, JNK, and p38. Moreover, TRAF6 binds to IL-17RB independently of its ligand and participates in IL-17RB-dependent NF- κ B activation^{[1][2][3]}.

It is reported that IL-17RB expression is significantly increased in gastric cancer tissues. Moreover, overexpression of IL-17RB is strongly associated with metastasis and inversely correlates with progression-free survival in pancreatic cancer. IL-17RB can enhance thyroid cancer cell invasion and metastasis via ERK1/2 pathway-mediated MMP-9 expression^[1]. By using a rodent ortholog of IL-17BR as a probe, IL-17BR message was found to be drastically up-regulated during intestinal inflammation elicited by indomethacin treatment in rats^[2]. IL-17RB expression in human innate type 2 lymphocytes, natural killer T (NKT) cells, and Th2 cells suggests a potential role in immune cells^[3].

REFERENCES

- [1]. Lei Ren, et al. IL-17RB enhances thyroid cancer cell invasion and metastasis via ERK1/2 pathway-mediated MMP-9 expression. *Mol Immunol*. 2017 Oct;90:126-135.
- [2]. Y Shi, et al. A novel cytokine receptor-ligand pair. Identification, molecular characterization, and in vivo immunomodulatory activity. *J Biol Chem*. 2000 Jun 23;275(25):19167-76.
- [3]. J  r  my Bastid, et al. The Emerging Role of the IL-17B/IL-17RB Pathway in Cancer. *Front Immunol*. 2020 Apr 21;11:718.

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