Data Sheet (Cat.No.TMPY-01767)

TargetMol

IL-12RB2 Protein, Mouse, Recombinant (His)

General Information

Synonyms:	A930027I18Rik;interleukin 12 receptor, beta 2;Ifnm;interleukin 12 receptor, β2;IL-12RB2
Protein Construction:	A DNA sequence encoding the mouse IL12RB2 (NP_032380.1) extracellular domain (Met 1-Asn 637) was fused with a polyhistidine tag at the C-terminus. Predicted N terminal: Asn 24
Species:	Mouse
Expression Host:	HEK293 Cells
Accession:	P97378
Molecular Weight:	70 kDa (predicted); 120-130 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Measured by its ability to bind Mouse IL12A & IL12B Heterodimer Protein in a functional ELISA. Immobilized mouse IL12RB2-His at 10 μg/ml (100 μl/well) can bind Mouse IL12A & IL12B Heterodimer Protein . The EC50 of Mouse IL12A & IL12B Heterodimer Protein is 50.2-117.2 ng/ml.
Purity:	> 97 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Shipping:

In general, Lyophilized powders are shipping with blue ice.

Protein Background

Interleukin-12 receptor subunit beta-2 (IL12RB2), also known as IL-12 receptor subunit beta-2, IL-12R subunit beta-2, IL-12R-beta-2, and IL-12RB2, is a type I transmembrane protein identified as a subunit of the interleukin 12 receptor complex. IL12RB2 belongs to the type I cytokine receptor family. The coexpression of IL12RB2 and IL12RB1

proteins was shown to lead to the formation of high-affinity IL12 binding sites and reconstitution of IL12 dependent signaling. The expression of IL12RB2 is up-regulated by IFN gamma in Th1 cells and plays a role in Th1 cell differentiation. The up-regulation of IL12RB2 is found to be associated with some infectious diseases, such as Crohn's disease and leprosy, which is thought to contribute to the inflammatory response and host defense. This subunit is the signaling component coupling to the JAK2/STAT4 pathway. IL12RB2 promotes the proliferation of T-cells as well as NK cells. IL12RB2 induces the promotion of T-cells towards the Th1 phenotype by strongly enhancing IFN-gamma production.

Reference

Yamamoto K,et al. (1997) Assignment of IL12RB1 and IL12RB2, interleukin-12 receptor beta 1 and beta 2 chains, to human chromosome 19 band p13.1 and chromosome 1 band p31.2, respectively, by in situ hybridization. Cytogenet. 77 (3-4): 257-8.

Morton SM,et al. (1998) Assignment of IL12RB2 to human chromosome 1p31.3→p31.2 between D1S230 and D1S198. Cytogenet. Cell Genet. 79 (3-4): 282-3.

Strausberg RL,et al. (2003) Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences. Proc Natl Acad Sci USA. 99 (26): 16899-903.