Data Sheet (Cat.No.TMPY-06427)

TargetMol

IL-12RB1 Protein, Cynomolgus, Recombinant (His)

General Information

Synonyms:	interleukin 12 receptor, β1;interleukin 12 receptor, beta 1
Protein Construction:	A DNA sequence encoding the Cynomolgus IL12RB1 (XP_015296347.1) (Met1-Asp545) was expressed with a polyhistidine tag at the C-terminus. Predicted N terminal: Cys 24
Species:	Cynomolgus
Expression Host:	HEK293 Cells
Accession:	A0A2K5VWV1
Molecular Weight:	58.98 kDa (predicted); 78.33 kDa (reducing conditions)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 90 % 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.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Interleukin 12 receptor, beta 1 is also known as IL-12 receptor beta component, IL-12R subunit beta-1, and CD212 antigen (CD212). IL12RB1(CD212) is a subunit of the interleukin 12 receptor. IL12RB1(CD212) is a type I transmembrane protein that belongs to the hemopoietin receptor superfamily. This protein binds to interleukin 12 (IL12) with a low affinity and is thought to be a part of the IL12 receptor complex. IL12RB1(CD212) forms a disulfide-linked oligomer, which is required for its IL12 binding activity. The coexpression of IL12RB1 and IL12RB2

proteins was shown to lead to the formation of high-affinity IL12 binding sites and reconstitution of IL12 dependent signaling. The lack of expression of this gene was found to result in the immunodeficiency of patients with severe mycobacterial and Salmonella infections. IL12RB1(CD212) Functions as an interleukin receptor that binds interleukin-12 with low affinity and is involved in IL12 transduction. It is associated with IL12RB2 it forms a functional, high-affinity receptor for IL12. IL12RB1(CD212) associates also with IL23R to form the interleukin-23 receptor which functions in IL23 signal transduction probably through activation of the Jak-Stat signaling cascade.

Reference

Cleary AM, et al. (2003) Impaired accumulation and function of memory CD4 T cells in human IL-12 receptor beta 1 deficiency. J Immunol. 170 (1): 597-603.

Suzuki Y, et al. (1997) Construction and characterization of a full length-enriched and a 5'-end-enriched cDNA library. Gene. 200 (1-2): 149-56.

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. Cell Genet. 77 (3-4): 257-8.

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