Human IL12RB1 / IL12RB / CD212 Protein (ECD,His Tag)

Catalog Number: **11674-H08H**

Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

CD212; IL-12R-BETA1; IL12RB; IMD30

Protein Construction:

A DNA sequence encoding the human IL12RB1 isoform 1 (NP_005526.1) extracellular domain (Met1-Glu540) was expressed fused with a polyhistidine tag at the C-terminus.

Source: Human

Expression Host: HEK293 Cells

QC Testing

Purity: > 94 % as determined by SDS-PAGE

Bio Activity:

Measured by its binding ability in a functional ELISA
. Immobilized human IL12RB1 at 20 μg/ml (100 μl/well) can bind human IL12B with a linear range of 2.56-64 ng/ml.

Endotoxin:

< 1.0 EU per μg of the protein as determined by the LAL method

Predicted N terminal: Cys 24

Molecular Mass:

The recombinant human IL12RB1 consists of 528 amino acids and predictes a molecular mass of 58.5 kDa. In SDS-PAGE under reducing conditions, the apparent molecular mass of rhIL12RB1 is approximately 70 kDa due to glycosylation.

Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Stability & Storage:
Samples are stable for twelve months from date of receipt at -20℃ to -80℃.

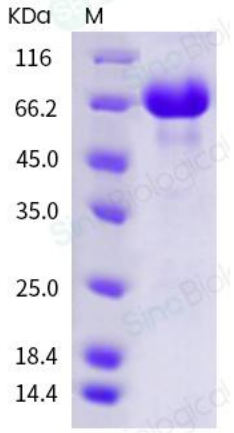
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

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 interleukine 12 (IL12) with a low affinity, and is thought to be a part of 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 which binds interleukin-12 with low affinity and is involved in IL12 transduction. It 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.

References

1.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.
2.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.
3.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.