

IL-18R beta/IL-18RAP Protein, Human, Recombinant (His)

General Information

Synonyms:	IL-18Rbeta;CD218b;IL-18R β /IL-18RAP;IL-18R β ;ACPL;IL-18R-beta;IL-1RacPL;CDw218b;IL-1R7;IL18RB;IL-1R-7;interleukin 18 receptor accessory protein;IL-18RAcP;IL-18R- β
Protein Construction:	A DNA sequence encoding the human IL18RAP (NP_003844.1) (Met 1-Gly 357) was expressed, fused with a polyhistidine tag at the C-terminus. Predicted N terminal: Phe 20
Species:	Human
Expression Host:	HEK293 Cells
Accession:	O95256-1
Molecular Weight:	40 kDa (predicted); 50-55 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Loaded Recombinant Human IL-18R beta/IL-18RAP Protein, His Tag (Cat#TMPY-01446) on His1K Biosensor, can bind Recombinant Human IL-18R α Protein, hFc Tag (Cat#TMPY-05491) (Premixed with Human IL-18 Protein, Tag Free, Cat#TMPY-00277) with an affinity constant of 42.9 nM as determined in BLI assay (Sartorius Octet RED384) (QC tested).
Purity:	≥ 97 % as determined by SDS-PAGE. ≥ 90 % as determined by SEC-HPLC.
Endotoxin:	< 1.0 EU/ μ g of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μ m 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:
Reconstituted with sterile deionized water to 0.25 mg/mL. Reconstitution conditions may vary depending on the lot.

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 18 receptor accessory protein, also known as IL18RAP and CDw218b (cluster of differentiation w218b), is an accessory subunit of the heterodimeric receptor for IL18. This protein enhances the IL18 binding activity of

IL18R1 (IL1RRP), a ligand-binding subunit of the IL18 receptor. The coexpression of IL18R1 and this protein is required for the activation of NF-kappaB and MAPK8 (JNK) in response to IL18. IL18RAP is required for the high-affinity binding of interleukin 18 (IL-18) to its receptor complex. IL18RAP together with IL18R1 mediates IL-18-dependent activation of NF-kappa-B and JNK. Two putative isoforms of IL18RAP were detected and the ratios and total levels of these isoforms may contribute to the etiology of coeliac disease. IL18R1 and IL18RAP polymorphisms have been found associated with diseases such as schizophrenia, HSV1 seropositivity, and atopic asthma. Analysis of IL18R1 and IL18RAP SNPs in 5 European prospective cohorts suggests that the variability of these genes are unlikely to contribute to modulate the risk of CVD in European populations.

Reference

Zhernakova A, et al.. (2008) Genetic analysis of innate immunity in Crohn's disease and ulcerative colitis identifies two susceptibility loci harboring CARD9 and IL18RAP. *Am J Hum Genet.* 82(5): 1202-10.

Grisoni ML, et al.. (2009) Lack of association between polymorphisms of the IL18R1 and IL18RAP genes and cardiovascular risk: the MORGAM Project. *BMC Med Genet.* 10: 44.

Koskinen LL, et al.. (2009) Association study of the IL18RAP locus in three European populations with coeliac disease. *Hum Mol Genet.* 18(6): 1148-55.

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