

IL-18RAP Protein, Mouse (HEK293, His)

Cat. No.:	HY-P78316
Synonyms:	ACPL; CD218b; CDw218b; IL-18R-beta; IL-18RacP; IL-18Rbeta; IL-1R-7; IL-1R7; IL-1RacPL; IL18RB; IL18RAP; IL-18R-bet; IL-18R-β; IL-18Rβ
Species:	Mouse
Source:	HEK293
Accession:	Q9Z2B1 (F20-E356)
Gene ID:	16174
Molecular Weight:	70-80 kDa

PROPERTIES

Appearance	Solution.
Formulation	Supplied as a 0.22 μm filtered solution of 20 mM PB, 500 mM NaCl, pH 7.4.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconstitution	N/A.
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice.

DESCRIPTION

Background

IL-18R beta (interleukin-18 receptor beta, also known as IL18RAP) is the signal transducing chain of the IL-18R complex and is also a member of the IL-1R family. IL-18R beta is expressed on T-cells, NK cells and dendritic cells, but not commonly expressed in mesenchymal cells^[1].

The amino acid sequence of human IL-18R beta protein has low homology for mouse IL-18R beta protein.

IL-18R beta is the receptor of IL-18. IL-18 forms a signaling complex by binding to the IL-18 alpha chain (IL-18Rα). The co-receptor, termed IL-18 receptor beta chain (IL-18Rβ), is recruited to form a high affinity complex^[1]. IL-18/IL-18Rα/IL-18Rβ ternary complex formation juxtaposes the intracellular Toll-Interleukin-1 receptor domains of IL-18Rα and IL-18Rβ. Then, the adaptor molecule myeloid differentiation factor 88 (MyD88) is recruited presumably with the aid of TRAM. MyD88 further interacts with IL-1 receptor associating kinase (IRAK) 4 and IRAK1/2 to form the large molecular assembly referred to as Myddosome, which subsequently activates IKK via TRAF6. Finally, the signal activates the NF-κB and mitogen-activated protein kinase pathways, which upregulate the expression of various inflammatory cytokines^[2].

IL-18R beta binds to IL-18 and IL-18 receptor alpha forms a signalling complex induces the expression of various inflammatory cytokines^[2]. IL-18R beta knockdown inhibits tumor cell metastasis^[4].

REFERENCES

[1]. Tsutsumi N, et al. The structural basis for receptor recognition of human interleukin-18. Nat Commun. 2014 Dec 15;5:5340.

[2]. Watanabe M, et al. Predominant expression of 950delCAG of IL-18R alpha chain cDNA is associated with reduced IFN-gamma production and high serum IgE levels in atopic Japanese children. J Allergy Clin Immunol. 2002 Apr;109(4):669-75.

[3]. Kim J, et al. Hypoxia-induced IL-18 increases hypoxia-inducible factor-1alpha expression through a Rac1-dependent NF-kappaB pathway. Mol Biol Cell. 2008 Feb;19(2):433-44.

Caution: Product has not been fully validated for medical applications. For research use only.

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