Data Sheet (Cat.No.TMPY-01251)

TargetMol

IL-1RAP/IL-1RAcP Protein, Human, Recombinant (His)

General Information

Synonyms:	C3orf13;IL-1RAcP;interleukin 1 receptor accessory protein;IL1R3
Protein Construction:	A DNA sequence encoding the human IL1R3 (NP_002173.1) extracellular domain (Met 1-Glu 359) was expressed, fused with the a C-terminal polyhistidine tag. Predicted N terminal: Ser 21
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q9NPH3-1
Molecular Weight:	40.7 kDa (predicted); 50-55 kDa (reducing condition, due to glycosylation)

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:	≥ 98 % as determined by SDS-PAGE. ≥ 90 % as determined by SEC-HPLC.
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-1 receptor accessory protein (IL-1RAcP) also known as Interleukin-1 receptor member 3 (IL-1R3) is a cytokine receptor that binds interleukin 1. The IL-1 receptor accessory protein (IL1RAP) is a transmembrane protein that interacts with IL-1R and is required for IL-1 signal transduction. Interleukin 1 induces the synthesis of the acute phase and proinflammatory proteins during infection, tissue damage, or stress, by forming a complex at the

cell membrane with an interleukin 1 receptor and an accessory protein. IL-1RAcP/IL-1R3 is a necessary part of the interleukin 1 receptor complex which initiates signaling events that result in the activation of interleukin 1-responsive genes. Alternative splicing of this gene results in two transcript variants encoding two different isoforms, one membrane-bound and one soluble. The ratio of soluble to membrane-bound forms increases during acute-phase induction or stress. IL-1RAcP/IL-1R3 mediates interleukin-1-dependent activation of NF-kappa-B. Isoform 1 is part of the membrane-bound form of the IL-1 receptor. Signaling involves the formation of a ternary complex containing IL1R1, TOLLIP, MYD88, and IRAK1 or IRAK2. Isoform 2 modulates the response to interleukins by associating with soluble IL1R1 and enhancing interleukin-binding to the decoy receptor.

Reference

Goldbach-Mansky R, et al. (2009) Autoinflammation: the prominent role of IL-1 in monogenic autoinflammatory diseases and implications for common illnesses. J Allergy Clin Immunol. 124(6): 1141-9.

Johnston A, et al. (2011) IL-1F5, -F6, -F8, and -F9: a novel IL-1 family signaling system that is active in psoriasis and promotes keratinocyte antimicrobial peptide expression. J Immunol. 186(4): 2613-22.

Ozaki K, et al. (2001) Effect of tumor weight and tube feeding on TNF-alpha and IL-1beta mRNA expression in the brain of mice. JPEN J Parenter Enteral Nutr. 25(6): 317-22.