# Human IL-1RAcP / IL-1R3 Protein (Fc Tag)

Catalog Number: 10121-H02H



#### **General Information** SDS-PAGE: KDa M Gene Name Synonym: 116 C3orf13: IL-1RAcP: IL1R3 66.2 **Protein Construction:** 45.0 A DNA sequence encoding the human IL1RAP (NP\_002173.1) (Met1-Glu359) was expressed with the Fc region of human IgG1 at the C-35.0 terminus Source: Human 25.0 Expression Host: HEK293 Cells

## **QC** Testing

**Purity:** > 95 % as determined by SDS-PAGE.

### Endotoxin:

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

### Stability:

Samples are stable for up to twelve months from date of receipt  $\,$  at -70  $\,^\circ\!\!\mathbb{C}$ 

Predicted N terminal: Ser 21

### **Molecular Mass:**

The recombinant human IL1RAP consists of 577 amino acids and predicts a molecular mass of 65.8 kDa.

### 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

#### Storage:

Store it under sterile conditions at -20  $^\circ\!C$  to -80  $^\circ\!C$  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.

## **Protein Description**

Interleukin-1 receptor accessory protein (IL-1RAcP) also known as Interleukin-1 receptor member 3 (IL-1R3) is a a cytokine receptor which 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 synthesis of 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 signalling 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 membranebound 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 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 interleukinbinding to the decoy receptor.

#### References

1.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. 2.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. 3.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.

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