

## ST2/IL-1 RL1 Protein, Human, Recombinant (isoform a, His)

### General Information

Synonyms:	ST2L;FIT-1;IL-1 R4;interleukin 1 receptor-like 1;ST2;DER4;IL1RL1;ST2V;T1;IL33R
Protein Construction:	A DNA sequence encoding the human IL1RL1 isoform A (NP_057316.3) (Met 1-Ser 328) was expressed, fused with a polyhistidine tag at the C-terminus. Predicted N terminal: Lys 19
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q01638-1
Molecular Weight:	36.3 kDa (predicted); 55-60 kDa (reducing condition, due to glycosylation)

### QC Testing

Biological Activity:	1. Measured by its binding ability in a functional ELISA. 2. Immobilized recombinant human IL33 at 10 µg/mL (100 µl/well) can bind biotinylated human IL1RL1 (isoform A) with a linear range of 0.032-8 µg/mL.
Purity:	> 95 % as determined by SDS-PAGE
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.

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

IL-1 receptor-like 1 (IL1RL1) is a membrane receptor involved in TH2 inflammatory responses and eosinophilia. It has previously been described that levels of the interleukin-1 like 1 (IL1RL1) protein can be used to diagnose cardiovascular disease and determine the prognosis for a patient with cardiovascular disease. The ligand for IL1RL1 has been described and named IL-33. Mutants in IL1RL1 have been associated with blood eosinophil counts

in a genome-wide association study and with asthma in family-based and case-control studies. As an important mediator involved in many immune and inflammatory responses, this cytokine has been implicated as a regulator of both the development and effector phases of type 2 helper T cell responses, and as a negative feedback modulator of macrophage proinflammatory function. IL33 is a specific ligand of ST2L and induces the production of Th2 cytokines.

### Reference

- Savenije OE, et al. (2011) Interleukin-1 receptor-like 1 polymorphisms are associated with serum IL1RL1-a, eosinophils, and asthma in childhood. *J Allergy Clin Immunol.* 127(3): 750-6.
- Li H, et al. (2000) The cloning and nucleotide sequence of human ST2L cDNA. *Genomics.* 67(3): 284-90.

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