

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

### General Information

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|-----------------------|---|
| Synonyms:             | IL1RL1;IL-1 R4;DER4;ST2;IL33R;interleukin 1 receptor-like 1;T1;ST2L;ST2V;FIT-1  |
| Protein Construction: | A DNA sequence encoding the human IL1RL1 isoform 2 (NP_003847.2) (Met1-Phe328) was expressed fused with a polyhistidine tag at the C-terminus. Predicted N terminal: Lys 19 |
| Species:              | Human   |
| Expression Host:      | HEK293 Cells  |
| Accession:            | Q01638-2  |
| Molecular Weight:     | 36.5 kDa (predicted); 55-60 kDa (reducing condition, due to glycosylation)  |

### QC Testing

|                      |  |
|----------------------|--|
| Biological Activity: | Measured by its ability to bind human IL33 in functional Elisa.  |
| Purity:              | ≥ 95 % 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:      | 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.<br><small>Actual storage temperature shall be subject to the COA.</small> |
| 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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