

## ST2/IL-1 RL1 Protein, Mouse, Recombinant (hFc)

### General Information

|                       |   |
|-----------------------|---|
| Synonyms:             | St2;ST2L;T1/ST2;interleukin 1 receptor-like 1;DER4;St2-rs1;Fit-1;Ly84;T1  |
| Protein Construction: | A DNA sequence encoding the mouse ST2 (NP_001020773.1) (Met1-Arg332) was expressed with the Fc region of human IgG1 at the C-terminus. Predicted N terminal: Ser 27 |
| Species:              | Mouse   |
| Expression Host:      | HEK293 Cells  |
| Accession:            | P14719-1  |
| Molecular Weight:     | 61.8 kDa (predicted); 93.2 kDa (reducing condition, due to glycosylation)   |

### QC Testing

|                      |  |
|----------------------|--|
| Biological Activity: | 1. Measured by its binding ability in a functional ELISA.<br>2. Immobilized canine IL33 at 10µg/mL (100µL/well) can bind mouse IL1RL1-Fc, the EC50 of mouse IL1RL1-Fc is 0.05-0.3 µg/mL.   |
| Purity:              | > 90 % 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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