

## IL-5R alpha/CD125 Protein, Human, Recombinant(aa 1-335, His)

### General Information

Synonyms:	interleukin 5 receptor, alpha;IL5R;CD125;CDw125;HSIL5R3;interleukin 5 receptor, $\alpha$
Protein Construction:	A DNA sequence encoding the human IL5Ra isoform 2 (NP_783852.1) (Met 1-Arg 335) was expressed, fused with a polyhistidine tag at the C-terminus. Predicted N terminal: Asp 21
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q01344-2
Molecular Weight:	37.3 kDa (predicted); 45-50 kDa (reducing condition, due to glycosylation)

### QC Testing

Biological Activity:	<ol style="list-style-type: none"><li>1. Measured by its binding ability in a functional ELISA.</li><li>2. Immobilized recombinant mouse IL5-his at 5 <math>\mu\text{g}/\text{mL}</math> (100 <math>\mu\text{L}/\text{well}</math>) can bind biotinylated human IL5Ra-his with a linear range of 32-4000 ng/mL.</li><li>3. Measured by its ability to inhibit IL5 dependent proliferation of TF1 human erythroleukemic cells. The ED50 for this effect is typically 0.7-2.8 <math>\mu\text{g}/\text{mL}</math>.</li></ol>
Purity:	> 85 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/ $\mu\text{g}$ of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 $\mu\text{m}$ 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 0.2 mg/mL. Reconstitution conditions may vary depending on the lot.
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#### Stability & Storage:

It is recommended to store recombinant proteins at  $-20^{\circ}\text{C}$  to  $-80^{\circ}\text{C}$  for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at  $-80^{\circ}\text{C}$ . For reconstituted protein solutions, the solution can be stored at  $-20^{\circ}\text{C}$  to  $-80^{\circ}\text{C}$  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

Interleukin 5 receptor, alpha (IL5RA) also known as CD125 (Cluster of Differentiation 125) is a subunit of the Interleukin-5 receptor. IL5RA (CD125) is an interleukin 5 specific subunit of a heterodimeric cytokine receptor. The

receptor is comprised of a ligand-specific alpha subunit and a signal transducing beta subunit shared by the receptors for interleukin 3 (IL3), colony-stimulating factor 2 (CSF2/GM-CSF), and interleukin 5 (IL5). The binding of this protein to IL5 depends on the beta subunit. The beta subunit is activated by the ligand binding and is required for the biological activities of IL5. This protein has been found to interact with syndecan binding protein (syntenin), which is required for IL5 mediated activation of the transcription factor SOX4. Six alternatively spliced transcript variants encoding three distinct isoforms have been reported. IL5RA (CD125) is a T-cell-derived cytokine that is particularly important in the development of asthma for the terminal differentiation, activation, and survival of committed eosinophil precursors.

### Reference

Isobe M, et al. (1992) Localization of the gene encoding the alpha subunit of human interleukin-5 receptor (IL5RA) to chromosome region 3p24-3p26. *Genomics*. 14(3): 755-8.

Cheong HS, et al. (2005) Association analysis of interleukin 5 receptor alpha subunit (IL5RA) polymorphisms and asthma. *J Hum Genet*. 50(12): 628-34.

Isobe M, et al. (1992) Localization of the gene encoding the alpha subunit of human interleukin-5 receptor (IL5RA) to chromosome region 3p24-3p26. *Genomics*. 14(3): 755-8.

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