

## IL-5R alpha/CD125 Protein, Human, Recombinant (hFc)

### General Information

Synonyms:	IL5R;CDw125;IL-5R-alpha;IL-5R- $\alpha$ ;IL-5 receptor subunit $\alpha$ ;CD125;IL-5 receptor subunit alpha;IL-5R subunit alpha;Interleukin-5 receptor subunit alpha;IL-5RA;Interleukin-5 receptor subunit $\alpha$ ;IL-5R subunit $\alpha$ ;IL5RA
Protein Construction:	Asp21-Glu335
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q01344
Molecular Weight:	70-85 KDa (reducing condition)
AA Sequence:	Asp21-Glu335

### QC Testing

Biological Activity:	Activity has not been tested. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	Greater than 95% as determined by reducing SDS-PAGE. (QC verified)
Endotoxin:	< 0.1 ng/ $\mu$ g (1 EU/ $\mu$ g) as determined by LAL test.
Formulation:	Lyophilized from a solution filtered through a 0.22 $\mu$ m filter, containing PBS, pH 7.4.

### Preparation and Storage

**Reconstitution:**  
Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100  $\mu$ g/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

**Stability & Storage:**

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

Interleukin-5 Receptor alpha (IL-5R $\alpha$ , CD125) is a 60 kDa hematopoietin receptor that plays a dominant role in eosinophil biology. Mature human IL-5 R $\alpha$  consists of a 322 aa extracellular domain (ECD) with a WSxWS motif and a four cysteine motif, a 20 aa transmembrane segment, and a 58 aa cytoplasmic domain. Within the ECD, human IL-5R $\alpha$  shares 71% aa sequence identity with mouse and rat IL-5 R $\alpha$ . Alternate splicing of human IL-5 R $\alpha$  generates

soluble secreted forms which function as IL-5 antagonists. The high affinity receptor for IL-5 is a complex that consists of the ligand binding IL-5 R $\alpha$  and the transmembrane common  $\beta$  chain ( $\beta$ c/CD131) which is shared with the receptor complexes for IL-3 and GMCSF. IL-5 R $\alpha$  binds IL-5 at low affinity and then associates with preformed  $\beta$ c oligomers to form the signaling competent receptor complex. IL-5 stimulation of CD34+ hematopoietic progenitor cells induces the up-regulation of transmembrane IL-5R $\alpha$  followed by eosinophilic differentiation and activation.

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