

# Recombinant Mouse IL-5RA/IL-5 R $\alpha$ Protein (Human Cells, His Tag)

Catalog Number: PKSM041096



**Note:** Centrifuge before opening to ensure complete recovery of vial contents.

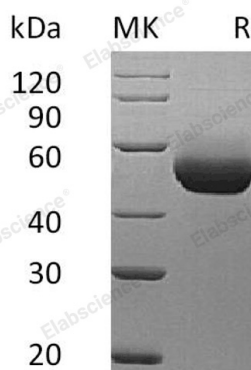
## Description

<b>Species</b>	Mouse
<b>Mol_Mass</b>	37.6 kDa
<b>Accession</b>	P21183
<b>Bio-activity</b>	Not validated for activity

## Properties

<b>Purity</b>	> 95 % as determined by reducing SDS-PAGE.
<b>Endotoxin</b>	< 1.0 EU per $\mu$ g of the protein as determined by the LAL method.
<b>Storage</b>	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80 °C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.
<b>Shipping</b>	This product is provided as lyophilized powder which is shipped with ice packs.
<b>Formulation</b>	Lyophilized from a 0.2 $\mu$ m filtered solution of PBS, 5% Trehalose, pH 7.4. Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
<b>Reconstitution</b>	Please refer to the printed manual for detailed information.

## Data



> 95 % as determined by reducing SDS-PAGE.

## Background

Interleukin 5 Receptor alpha (IL-5 R $\alpha$ ), also known as CD125, is a hematopoietin receptor that plays a dominant role in eosinophil biology. Mature mouse IL-5 R $\alpha$  consists of a 322 amino acid (aa) extracellular domain (ECD) with a WSxWS motif and a four cysteine motif, a 22 aa transmembrane segment, and a 54 aa cytoplasmic domain. 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 GM-CSF. 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-5 R $\alpha$  followed by eosinophilic differentiation and activation. IL-5 R $\alpha$  also promotes the differentiation of basophils and B cells. Exposure of mature eosinophils to IL-5 attenuates their IL-5 responsiveness by inducing the down-regulation of surface IL-5 R $\alpha$  and increased production of soluble IL-5 R $\alpha$ .

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Rev. V3.5