



Recombinant Protein Technical Manual  
Recombinant Mouse CD123/IL3RA Protein (ECD, His  
Tag)  
RPES4347

### Product Data:

**Product SKU:** RPES4347

**Size:** 50µg

**Species:** Mouse

**Expression host:** HEK293 Cells

**Uniprot:** EDL20630.1

### Protein Information:

**Molecular Mass:** 35.9 kDa

**AP Molecular Mass:**

**Tag:** C-His

**Bio-activity:**

**Purity:** > 95 % as determined by SDS-PAGE

**Endotoxin:** < 1.0 EU per µg of the protein as determined by the LAL method.

**Storage:** 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.

**Shipping:** This product is provided as lyophilized powder which is shipped with ice packs.

**Formulation:** Lyophilized from sterile PBS, pH 7.4

**Reconstitution:** Please refer to the printed manual for detailed information.

**Application:**

**Synonyms:** CD123;CDw123;SUT

## Immunogen Information:

**Sequence:** Met1-Lys331

## Background:

Interleukin-3 receptor subunit alpha, also known as IL-3 receptor subunit alpha, IL-3R-alpha, CD123, and IL3RA, is a single-pass type I membrane protein which belongs to the type I cytokine receptor family and Type 5 subfamily. The specific alpha subunit of the interleukin-3 receptor (IL-3Ralpha, CD123) is strongly expressed in various leukemic blasts and leukemic stem cells and seems to be an excellent target for the therapy of leukemias. The WSXWS motif of IL3RA appears to be necessary for proper protein folding and thereby efficient intracellular transport and cell-surface receptor binding. The box one motif of IL3RA is required for JAK interaction and / or activation. IL3RA represents a unique marker for primitive leukemic stem cells. Targeting of IL3RA may be a promising strategy for the preferential ablation of AML cells. Aberrant IL3RA expression is a good marker for monitoring of minimal residual disease. IL3RA is strongly expressed in various leukemic blasts and leukemic stem cells and seems to be an excellent target for the therapy of leukemias. Recent studies have shown that interleukin-3 receptor alpha (CD123) is highly expressed on leukemia stem cells of patients with acute myeloid leukemia, and is correlated with tumor load and poor prognosis. CD123 was highly expressed in the bone marrow of the patients with myelodysplastic syndrome (MDS), significantly correlated with the proportion of bone marrow blasts, and thus might be the marker of MDS malignant clone. IL3RA is also a useful new marker for distinguishing B-cell disorders with circulating villous lymphocytes as its expression is characteristic of typical hairy cell leukemia (HCL) with high sensitivity and specificity.