

# Recombinant Human IL-3 Protein

Catalog No.: RP01362 **Recombinant**

## Sequence Information

Species	Gene ID	Swiss Prot
Human	3562	P08700

### Tags

C-His

### Synonyms

IL3;IL-3;MCGF;MULTI-CSF

## Product Information

Source	Purification
HEK293 cells	> 95% by SDS-PAGE.

Calculated MW	Observed MW
15.93 kDa	20-35 kDa

### Endotoxin

< 1 EU/μg of the protein by LAL method.

### Formulation

Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4.

### Reconstitution

Centrifuge the vial before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stabilizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

## Contact

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## Background

IL3 (interleukin 3), also known as IL-3, is a potent growth-promoting cytokine that belongs to the IL-3 family. IL3/IL-3 also belongs to the group of interleukins. Interleukins are produced by a wide variety of body cells. The function of the immune system depends in a large part on interleukins, and rare deficiencies of a number of them have been described, all featuring autoimmune diseases or immune deficiency. The majority of interleukins are synthesized by helper CD4+ T lymphocytes, as well as through monocytes, macrophages, and endothelial cells. They promote the development and differentiation of T, B, and hematopoietic cells. IL3/IL-3 is capable of supporting the proliferation of a broad range of hematopoietic cell types. It is involved in a variety of cell activities such as cell growth, differentiation, and apoptosis. IL3/IL-3 has been shown to also possess neurotrophic activity, and it may be associated with neurologic disorders.

## Basic Information

### Description

Recombinant Human IL-3 Protein is produced by HEK293 cells expression system. The target protein is expressed with sequence (Ala20-Phe152) of human interleukin-3/IL-3 (Accession #NP\_000579.2) fused with a 6×His tag at the C-terminus.

### Bio-Activity

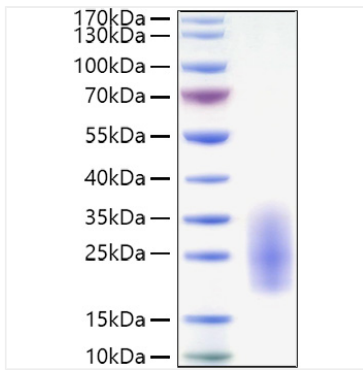
1. Measured in a cell proliferation assay using TF-1 human erythroleukemic cells. The ED<sub>50</sub> for this effect is 1.5-6 ng/mL. 2. Recombinant Human TPO(50 ng/mL, Cat. RP00174), IL-3(15 ng/mL), IL-6(15 ng/mL, Cat. RP00201) and IL-11(15 ng/mL, Cat. RP00050) induce hematopoietic stem and progenitor cells to differentiate into megakaryocytes. After 6 days, the induction of CD41/42+ megakaryocytes was successful.

### Storage

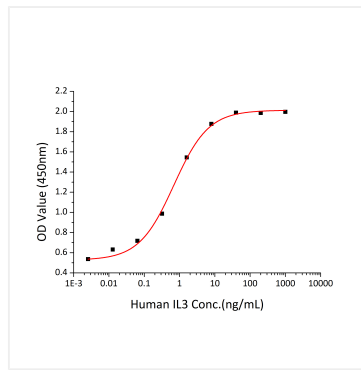
Store at -20°C. Store the lyophilized protein at -20°C to -80°C up to 1 year from the date of receipt. After reconstitution, the protein solution is stable at -20°C for 3 months, at 2-8°C for up to 1 week. Avoid repeated freeze/thaw cycles.

## Validation Data

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Recombinant Human IL-3 Protein was determined by SDS-PAGE with Coomassie Blue, showing a band at 20-35kDa.



Recombinant Human IL3 promotes the proliferation of TF 1 human erythroleukemic cells. The ED<sub>50</sub> for this effect is 0.345-1.38 ng/mL, corresponding to a specific activity of  $7.25 \times 10^5 \sim 2.90 \times 10^6$  units/mg.