

## Recombinant human IL-3 protein (Qk090)



**Type:** Stem cells

**Available for purchase:** Unit Size (µg): 25, 50, 100, 500, 1000

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### Product Information

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Recombinant Human Interleukin 3 (IL-3) is a pleiotropic cytokine which plays a crucial role in hematopoiesis and acts as a multi-lineage growth factor. As a hematopoietic growth factor, it promotes the proliferation, differentiation, and survival of various [hematopoietic stem cells](#) towards myeloid progenitors. IL-3 is commonly used in cell culture to stimulate the differentiation and maturation of human induced pluripotent stem cells towards mast cells, basophils, neutrophils, eosinophils, monocytes, and megakaryocytes.

Human IL-3 comprises 140 amino acids with a molecular weight of 15.2 kDa. This protein is [animal origin-free](#), carrier protein-free, and tag-free to ensure a homogenous population with exceptional lot-to-lot consistency. IL-3 is suitable for reproducible and high-quality myeloid progenitors and more specific lineages.

**This protein is also available as GMP compliant [Cell Therapy Grade](#), to enquire email [ryan.weber@matriqx.com](mailto:ryan.weber@matriqx.com).**

#### Alternative protein names

Multilineage colony-stimulating factor; Hematopoietic growth factor; P-cell stimulating factor; Mast-cell growth factor; Colony-stimulating factor, IL 3, IL3, Qk90

#### Molecular weight

15.2 kDa (monomer)

#### Protein Uniprot number

Highly pure human protein (UniProt: P08700)

## Species reactivity

- human
- species similarity:
- mouse - 27%
- rat - 26%
- bovine - 30%

## Product Information

- >98%, by SDS-PAGE quantitative densitometry
- Expressed in *E. coli*
- Animal origin-free (AOF) and carrier protein-free
- Manufactured in our Cambridge, UK laboratories
- Lyophilized from acetonitrile, TFA

## Reconstitution instructions

- Resuspend in 10 mM HCl (Reconstitution solution A) at >50 µg/ml

## Featured applications

- Differentiation of myeloid progenitors into erythrocytes and megakaryocytes
- Differentiation of peripheral blood monocytes to myeloid lineages
- Generation of iPSC-derived myeloid and lymphoid progenitors
- Maintenance and differentiation of hematopoietic stem cells
- Maintenance of peripheral blood cells

## Further quality assays

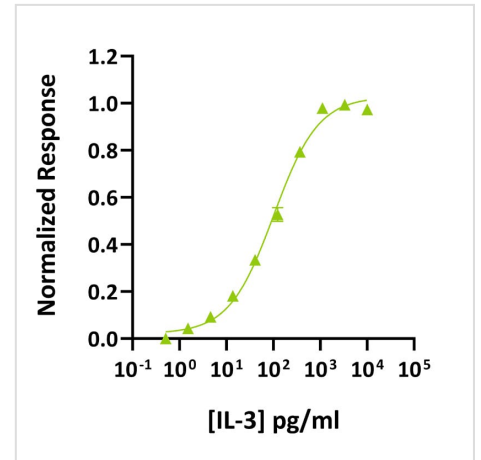
- Mass spectrometry: single species with expected mass
- Recovery from stock vial: >95%
- Endotoxin: <0.05 EU/µg protein

## Scientific Information

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### Bioactivity

IL-3 activity was determined using proliferation of TF-1 human myeloid leukemia cells. EC50 = 102 pg/ml (6.7 pM). Cells were treated in triplicate with a serial dilution of IL-3 for 72 hours. Cell viability was measured using the CellTiter-Glo (Promega) luminescence assay. Data from Qk090 lot #204548.



### Purity

Recombinant IL-3 migrates as a major band at approximately 15.2 kDa in non-reducing (NR) and reduced (R) conditions. No contaminating protein bands are present. The purified recombinant protein (3 µg) was resolved using 15% w/v SDS-PAGE in reduced (+β-mercaptoethanol, R) and non-reduced conditions and stained with Coomassie Brilliant Blue R250. Data from Qk090 batch #204548.



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**Original product page:** <https://ryan.calliope-alpha.ts.net/product/recombinant-human-il-3-protein-qk090/>

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