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# Recombinant human IL-3 protein

Catalog Number: ILC0702

# **PRODUCT INFORMATION**

## **Expression system**

E.coli

#### **Domain**

20-152aa

#### UniProt No.

P08700

#### **NCBI Accession No.**

NP 000579

#### **Alternative Names**

IL-3, Multipotential colony-stimulating factor(multi-CSF), Mast cell growth factor(MCGF), interleukin 3 (colony-stimulating factor, multiple), MuLTI-CSF, MCGF, multilineage-colony-stimulating factor, hematopoietic growth factor, P-cell stimulating factor, mast-cell growth factor

#### **PRODUCT SPECIFICATION**

# **Molecular Weight**

17.3 kDa (154aa) confirmed by MALDI-TOF

#### Concentration

1mg/ml (determined by Bradford assay)

# **Formulation**

Liquid in. 20mM Tris-HCl buffer (pH 8.0) containing, 10% glycerol, 0.2mM PMSF

### **Purity**

> 90% by SDS-PAGE

#### **Endotoxin level**

< 1 EU per 1ug of protein (determined by LAL method)

# **Biological Activity**

Measured in a cell proliferation assay using TF-1 human erythroleukemic cells. The ED50 for this effects less or equal to 0.15ng/ml.

#### Tag

His-Tag

#### **Application**

SDS-PAGE, Bioactivity

# **Storage Condition**

Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.



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# **BACKGROUND**

### **Description**

Interleukin-3 (IL-3) stimulates the proliferation of hematopoietic pluripotent progenitor cells. It is secreted by activated T cells to support growth and differentiation of T cells from the bone marrow in an immune response. IL-3 exerts its biological activities through binding to specific cell surface receptors. IL-3 receptor is a complex consisting of alpha and beta subunits, which in turn induces activation of JAK2/ STAT5, induction of c-myc, and activation of the Ras pathway. Human IL3 is a protein of 15-17 kDa (133 amino acids). It is synthesized as a precursor containing a hydrophobic secretory signal sequence of 19 amino acids. IL3 contains two putative glycosylation sites at positions 15 and 70 and contains a single disulfide bond (Cys16/84). Recombinant human IL-3 was expressed in E. coli and purified by using conventional chromatography after refolding of the isolated inclusion bodies in a redox buffer.

#### **Amino acid Sequence**

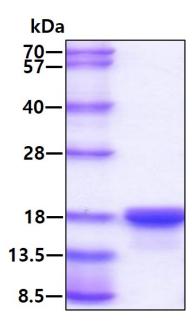
<MGSSHHHHHH SSGLVPRGSH M>APMTQTTSL KTSWVNCSNM IDEIITHLKQ PPLPLLDFNN LNGEDQDILM ENNLRRPNLE AFNRAVKSLQ NASAIESILK NLLPCLPLAT AAPTRHPIHI KDGDWNEFRR KLTFYLKTLE NAQAQQTTLS LAIF

#### **General References**

Allan SM., et al. (2005), Nat. Rev. Immunol. 5:629. Michaud DS., et al. (2006), Cancer Res. 66(8):4525-30

# **DATA**

#### **SDS-PAGE**



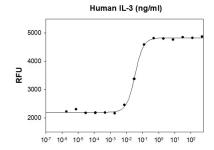
3ug by SDS-PAGE under reducing condition and visualized by coomassie blue stain.



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Human IL-3 stimulates cell proliferation of the TF-1 human erythroleukemic cells. The ED50 range is less or equal 0.15 ng/ml.

