

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

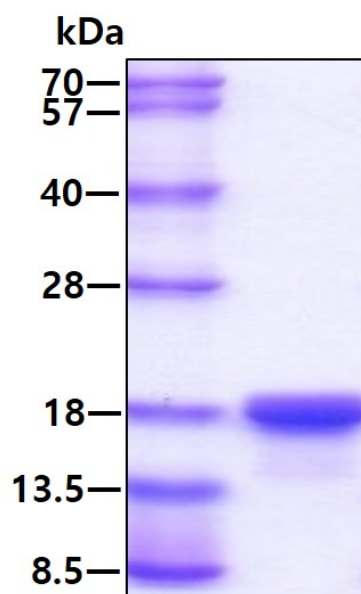
<MGSSHHHHH SSGLVPRGSH M>APMTQTSSL KTSWVNCSNM IDEIITHLKQ PPLPLDFNN LNGEDQDILM
ENNLRPNLE AFNRAVKSQ NASAIESILK NLLPCLPLAT AAPTRHPIHI KDGDWNEFRR KLTFYKLTLE NAQAQQTTLS LAIF

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

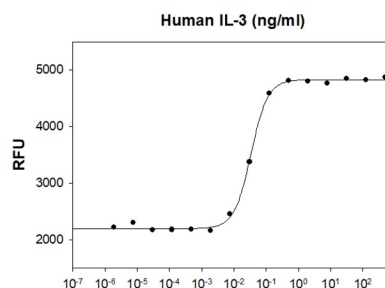


3ug by SDS-PAGE under reducing condition and visualized by coomassie blue stain.

Biological Activity

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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.