

IL-3, Human

Cat. No.: Z03156-10

Size: 10.0 ug

Synonyms: MCGF (Mast cell growth factor), Multi-CSF, HCGF, P-cell stimulation factor

Description:

Interleukin-3 (IL-3) is a pleiotropic cytokine belonging to the interleukin family. IL-3 shares similarities with Granulocyte-Macrophage Colony-Stimulating Factor (GM-CSF) and IL-5: they all have a four-helix bundle structure, are located on the same chromosomes in both human and mouse, are produced by activated T cells, and share receptors. The IL-3/IL-5/GM-CSF receptor family members are all heterodimeric, composed of a receptor-specific α chain and a common β chain. IL-3 is also called multi-colony stimulating factor since it stimulates the development and colony formation of multiple lineages of hematopoietic cells by activating intracellular pathways such as Ras-Raf-ERK and JAK/STAT. IL-3 inhibits apoptosis and promotes cell survival by targeting the anti-apoptotic bcl-2 gene family.

Recombinant human Interleukin-3 (rhIL-3) produced in *E. coli* is a single non-glycosylated polypeptide chain containing of 134 amino acids. A fully biologically active molecule, rhIL-3 has a molecular mass of 15.2 kDa analyzed by non-reducing SDS-PAGE and is obtained by proprietary chromatographic techniques at GenScript.

Amino Acid Sequence:

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00001 MAPMTQTTP L KTSWVNC SNM IDEIITHLKQ PPLPLDFNN
00041 LNGEDQDILM ENNLRRPNLE AFNRAVKSLQ NASAIESILK
00081 NLLPCLPLAT AAPTRHPIHI KGDWNEFRR KLTFYKLTLE
00121 NAQAQQTLS LAIF
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Source: *E. coli*

Species: Human

Biological Activity: ED₅₀ < 0.5 ng/mL, measured by a cell proliferation assay using TF-1 cells, corresponding to a specific activity of > 2 × 10⁷ units/mg.

Molecular Weight: 15.2 kDa, observed by non-reducing SDS-PAGE.

Formulation: Lyophilized after extensive dialysis against PBS.

Reconstitution: Reconstituted in ddH₂O at 100 µg/mL.

Purity: > 95% as analyzed by SDS-PAGE and HPLC.

Endotoxin Level: < 0.2 EU/µg, determined by LAL method.

Storage: Lyophilized recombinant human Interleukin-3 (rhIL-3) remains stable up to 6 months at lower than -70°C from date of receipt. Upon reconstitution, rhIL-3 remains stable up to 2 weeks at 4°C or up to 3 months at -20°C.