

Growth Factor Data Sheet

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Interleukin 3 is a pleiotropic factor produced primarily by activated T-cells that can stimulate the proliferation and differentiation of pluripotent hematopoietic stem cells as well as various lineage committed progenitors. In addition, IL3 also affects the functional activity of mature mast cells, basophils, eosinophils and macrophages. Because of its multiple functions and targets, it was originally studied under different names, including mast cell growth factor, P-cell stimulating factor, burst promoting activity, multicolony stimulating factor, thy-1 inducing factor and WEHI-3 growth factor. In addition to activated T-cells, other cell types can also produce IL3, such as human thymic epithelial cells, activated murine mast cells, murine keratinocytes and neurons/astrocytes. At the amino acid sequence level, mature human and murine IL3 share only 29% sequence identity. Consistent with this lack of homology, IL3 activity is highly species-specific and human IL3 does not show activity on murine cells.

Catalog Number	1110-03
Product Name	IL3, Human Recombinant Human Interleukin 3 IL-3 Mast-cell Growth Factor, MCGF Multi-CSF P-cell Stimulating Factor
Source	<i>Escherichia coli</i>
MW	~15.0 kDa (133 amino acid)
Sequence	APMTQTSLK TSWVNCNMI DEIITHLKQP PLPLDFNNL NGEDQDILME NNLRRPNLEA FNRAVKSLQN ASAIESILKN LLPCLPLATA APTRHPIHIK DGDWNEFRRK LTFYKLTLEN AQAQQTTLSL AIF
Gene ID	3562
Purity	>97% by SDS-PAGE and HPLC analyses
Biological Activity	Fully biologically active when compared to standard. The ED ₅₀ as determined by a cell proliferation assay using human TF-1 cells is less than 0.1 ng/ml, corresponding to a specific activity of >1.0 × 10 ⁷ IU/mg.
Formulation	Sterile filtered white lyophilized powder. Purified and tested for use in cell culture.
Storage/Handling	This lyophilized preparation is stable at 2-8°C, but should be kept at -20°C for long term storage. The reconstituted sample can be apportioned into working aliquots and stored at -80 °C for up to 6 months. Avoid repeated freeze/thaw cycles.
Reconstitution	The sample should be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in a siliconized tube using PBS that contains a 0.1% BSA to a concentration of 0.1-1.0 mg/mL. Reconstituted solutions are stable for up to one week at 2-8°C. Stock solutions should be aliquoted and stored at -80°C. Further dilutions should be made in appropriate buffered solutions containing BSA or serum.