

Growth Factor Data Sheet

GoldBio growth factors are manufactured for **RESEARCH USE ONLY** and cannot be sold for human consumption!

Leukemia Inhibitory Factor (LIF) is a lymphoid factor which promotes long-term maintenance of embryonic stem cells by suppressing spontaneous differentiation. LIF binds to the specific LIFR- α , which forms a heterodimer containing a GP130 signal transducing subunit. LIF is normally expressed in the trophectoderm of the developing embryo and has a number of other activities including cholinergic neuron differentiation, control of stem cell pluripotency, bone and fat metabolism, mitogenesis of certain factor dependent cell lines and promotion of megakaryocyte production *in vivo*. LIF is not required for human embryonic stem cell cultures.

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| Catalog Number | 1130-07 |
| Product Name | LIF, Human Recombinant Human Leukemia Inhibitory Factor LIF |
| Source | <i>Escherichia coli</i> |
| MW | 19.7 kDa (180 amino acids). |
| Sequence | SPLPITPVNA TCAIRHPCHN NLMNQIRSQL AQLNGSANAL FILYYTAQGE PFPNNLDKLC GPNVTDFFPF HANGTEKAKL VELYRIVVYL GTSLGNITRD QKILNPSALS LHSKLNATAD ILRGLLSNVL CRLCSKYHVG HVDVTYGPD TSGKDV FQKKK LGCQLLGKYK QIIAVLAQAF |
| Accession Number | P15018 |
| Purity | >97% by SDS-PAGE and HPLC analyses |
| Biological Activity | Fully biologically active when compared to standard. The ED ₅₀ as determined by the dose-dependent proliferation of human TF-1 cells is less than 0.1 ng/ml, corresponding to a specific activity of $>1.0 \times 10^7$ 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. |