

> Leukemia Inhibiting Factor

<i>cat. no.</i>	<i>amount</i>	<i>note</i>
STS-LIF 10	10 ⁶ U	Leukemia Inhibiting Factor (LIF)
STS-LIF 50	5x10 ⁶ U	Leukemia Inhibiting Factor (LIF)
STS-LIF 100	10 ⁷ U	Leukemia Inhibiting Factor (LIF)

Leukemia Inhibiting Factor (LIF) is a pleiotropic cytokine of the interleukin-6 family with different biological actions in various tissue systems, including modulation of cell growth and differentiation. Although named for its ability to inhibit proliferation of a myeloid leukemic cell line by inducing differentiation, it also regulates the growth and differentiation of embryonic stem cells, primordial germ cells, peripheral neurons, osteoblasts, adipocytes, and endothelial cells.

PRODUCTS DESCRIPTION AND FEATURES

GeneSpin Murine Recombinant LIF has been produced in E.Coli as an MPB fusion protein. The protein was bound to a resin coupled to maltose and eluted at 90% purity. LIF was enzymatically cleaved from MPP and purified to nearly homogeneity using FPLC.

GeneSpin Murine Recombinant LIF is a 20 kDa protein known to induce multiple biological responses. Initially characterized for its ability to induce macrophage differentiation and inhibition of proliferation of the murine myeloid cell line M11, murine LIF is known to induce proliferation of haematopoietic stem cells and to maintain the undifferentiated state of cultured embryonic stem (ES) cells. GeneSpin LIF has been tested for the ability to maintain ES cells in an undifferentiated state when used at 1000 Units/ml. Identical results were obtained with R1 and E14 ES cell lines.

COMPOSITION

Murine Recombinant LIF is supplied as a sterile, cell culture-grade solution containing 10⁶-10⁷ Units in 1ml of PBS with 0.5% BSA. No preservatives added.

APPLICATION

For ES cell culture 1000 U/ml are recommended.

QUALITY CONTROL

SDS-PAGE: 8-15%gel, Coomassie Blue Stained. Band at 20 kDa, >95% pure.

M1 growth inhibition assay: 50 units is defined as the concentration of LIF in 1ml of tissue culture medium able to induce 50% of differentiated cells.

Sterilized by ultrafiltration on 0,2um membrane.

STORAGE AND HANDLING

Stable for six months when stored @ 4°C. Dilutions should be made using buffer or medium to which protein (e.g.1% BSA) has been added.

FOR RESEARCH USE ONLY