

PRODUCT DESCRIPTION

Mouse Leukemia Inhibitory Factor (LIF) is a lymphoid factor which promotes long-term maintenance of embryonic stem cells by suppressing spontaneous differentiation. LIF 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*. Mouse LIF is a 20 kDa protein containing 181 amino acid residues. The non-glycosylated, *E. coli*-expressed, recombinant LIF is indistinguishable from native LIF in its biological activity *in vitro*.

SOURCE

Mature mouse LIF* was expressed in *E. coli* as a fusion protein with GST. The GST moiety was cleaved with thrombin and mouse LIF was purified by HPLC chromatography.

PURITY

Purity is greater than 95%, as determined by analytical HPLC and SDS-PAGE. Endotoxin level is <0.1 ng per mg of mouse LIF.

ACTIVITY

The activity of recombinant mouse LIF is determined by the ability to induce differentiation of mouse M1 myeloid leukemic cells. The minimum detectable concentration of mouse LIF in this assay is 0.5 ng/mL. The specific activity is $\geq 1 \times 10^8$ units/mg, where 50 units is defined as the amount of mouse LIF required to induce differentiation in 50% of the M1 colonies grown in agar cultures.

FORMULATION

Recombinant mouse LIF is supplied at a concentration of 10 μ g/mL in phosphate buffered saline (PBS), pH 7.4, and 0.02% Tween20. No preservatives are added.

Further dilutions should be made into buffer or medium to which protein (e.g. 1% BSA) or Tween20 has been added.

STABILITY AND STORAGE

Maintain recombinant mouse LIF at 2 - 8°C for six to twelve months.

Avoid repeated freezing and thawing.

*Manufactured by CHEMICON International, Inc. LIF is protected under US Patent Nos. 5,187,077; 5,427,925; 5,443,825; 5,750,654; and 6,261,548; European Patent No. 0285 448; and related foreign patents and is not available for resale.

