

Product Information

Leukemia Inhibitory Factor mouse

Recombinant, expressed in *Escherichia coli*

Catalog Number **L5158**

Synonym: LIF

Product Description

Leukemia Inhibitory Factor mouse, a 20 kDa protein containing 181 amino acid residues, is a multifunctional glycoprotein that induces macrophage differentiation.¹ LIF stimulates the differentiation of the macrophage cell line M1.¹ LIF allows embryonic stem cells to remain in an undifferentiated state and can maintain their proliferation in culture.² Synonyms for LIF include differentiation-inhibitory activity (DIA) for mouse embryonic stem (ES) cells,³ human interleukin for DA cells (HILDA),⁴ and cholinergic neuronal differentiation factor.⁵

Natural mouse LIF is produced by T cells, fibroblasts, liver, and heart. Recombinant mouse LIF is produced as a fusion protein with glutathione S-transferase (GST) using the pGEX expression system.⁶ There is 78% homology between mouse and human LIF.⁷ Human LIF is active on human and mouse cells. Mouse LIF is active on mouse cells.

Reagents

Supplied as a solution in phosphate buffered saline, pH 7.4 with 0.02% TWEEN® 20

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

Store at 2-8 °C for a maximum of 1 year. For extended storage, aliquot in polypropylene containers containing 0.02% TWEEN 20 or 1% BSA and store at 2-8 °C.

Product Profile

The biological activity of recombinant mouse LIF is measured by its ability to stimulate the differentiation of the M1 mouse myeloid leukemic cell line. The specific activity is not less than 1 x10⁸ units/mg, where 50 units is defined as the amount of mouse LIF required to induce differentiation in 50% of the M1 colonies in 1 ml agar cultures.

References

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4. Moreau, J. F., et al., *Nature*, **336**, 690 (1988).
5. Yamamoni, T., et al., *Science*, **246**, 1412 (1989).
6. Smith, D. B., and Johnson, K. S., *Gene*, **67**, 31 (1988).
7. Gough, N. M., et al., *Proc. Natl. Acad. Sci. USA*, **85**, 2623 (1988).

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LIF Mouse Recombinant is Manufactured by Chemicon International Inc. LIF Mouse Recombinant is protected under US Patent No. 5,750,654.

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