



Product Specification Sheet

Product Name	Stemfactor™ LIF, Mouse Recombinant
Description	Recombinant Mouse LIF is a lymphoid factor that promotes long-term maintenance of the pluripotency of mouse embryonic stem cells by suppressing spontaneous differentiation ^{1,2} . Leukemia Inhibitory Factor (LIF) has additional functions such as cholinergic neuron differentiation, bone and fat metabolism, mitogenesis of certain factor dependent cell lines and promotion of megakaryocyte production <i>in vivo</i> . Mouse LIF is an approximate 20 kDa protein containing 202 amino acid residues.
Catalog Number	03-0011-100
Quantity	1 ml
Concentration	100 µg/ml
Source	<i>E. coli</i>
Purity	Greater than 98% by SDS-PAGE analysis.
Formulation	LIF is supplied as a 0.22 µm sterile filtered liquid in PBS containing 1% w/v BSA as carrier.
Endotoxin Level	Less than 1 EU/µg of LIF as determined by the LAL method.
Biologic Activity	Mouse LIF activity is assessed by its ability to induce differentiation of M1 myeloid leukemia cells. The specific activity is greater than or equal to 1×10^7 units/ml, where 50 units is defined as the amount of mouse LIF required to induce differentiation in 50% of the M1 colonies in 1 ml of medium.
Recommended Usage	1 ml of mouse LIF with the specific activity of 1×10^7 units/ml is sufficient to treat 10 L of embryonic stem cell culture media.
Sterility	Tested to be negative for mycoplasma by PCR and microbial contamination by a sterility test.
Storage and Stability	LIF is shipped at room temperature. Concentrated LIF is stable for up to 6 months from date of receipt when stored at 4°C. Prior to use dilute LIF in sterile tissue culture media, aliquot to a convenient concentration, and store at 4°C. Avoid freeze-thaw cycles as it can result in loss of activity.
References	<ol style="list-style-type: none">Williams, R.L., Hilton, D.J., Pease, S., Willson, T.A., Stewart, C.L., Gearing, D.P., Wagner, E.F., Metcalf, D., Nicola, N.A., and Gough, N.M. (1988) Myeloid leukemia inhibitory factor maintains the developmental potential of embryonic stem cells. <i>Nature</i> 336: 684-687.Metcalf, D., Hilton, D.J., and Nicola, N.A. (1988) Clonal analysis of the actions of the murine leukemia inhibitory factor on leukemic and normal murine hemopoietic cells. <i>Leukemia</i> 2: 216-221.

For research use only. Not for use in diagnostic procedures.

©Stemgent 2012. Unless otherwise noted, Stemgent, Stemgent Logo and all other trademarks are the property of Stemgent, Inc.

Stemgent, 10575 Roselle St., San Diego, CA 92121 www.stemgent.com v3.0