

Store at
-20°C

Mouse LIF Recombinant Protein



#72934

20 µg

Support: +1-978-867-2388 (U.S.)
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orders@cellsignal.comEntrez-Gene ID #16878
UniProt ID #P09056

For Research Use Only. Not For Use In Diagnostic Procedures.

Background: Leukemia Inhibitory Factor (LIF) is a 20 kDa pleiotropic factor belonging to the IL-6 superfamily of cytokines (1). LIF is expressed in a number of tissues and cell types. The LIF receptor is a heterodimer comprised of LIF-R (gp190) and gp130, a common signal transducer for IL-6-type cytokines (1). Depending on cell type and context, LIF/LIF-R can activate Erk, PI3K, and Jak1/Stat1/3 pathways (1,2). LIF has a diverse array of biological activities. Murine embryonic stem cells are dependent on LIF for pluripotency and self-renewal *in vitro* (1). Exercise-induced LIF secretion in muscle induces myoblast proliferation, suggesting that LIF may play a role in exercise-induced muscle hypertrophy (2). LIF also negatively regulates Th2 and Th17 cell differentiation (3,4).

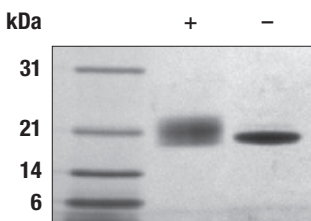
Molecular Weight: 20 kDa

Endotoxin: Endotoxin levels are ≤ 1 EU / 1 µg mLIF.

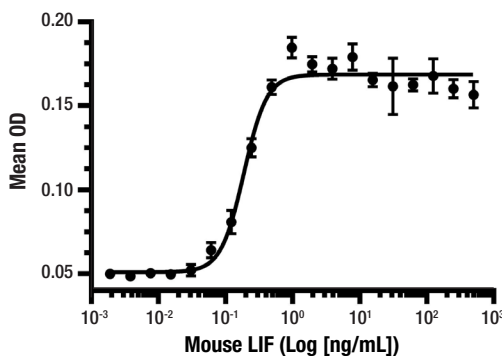
Purity: $\geq 95\%$ purity was determined by SDS-PAGE.

Source/Purification: Recombinant mouse LIF was expressed in *E. coli* and is supplied in a lyophilized form.

Bioactivity: The bioactivity of recombinant mouse LIF was determined by measuring the production of IL-6 from M1 cells. The ED_{50} of each lot is ≤ 1 ng/mL.



The purity of Mouse LIF Recombinant Protein was determined by SDS-PAGE of 1 µg reduced (+) and non-reduced (-) recombinant mLIF and staining with Coomassie Blue.



Serial dilutions of Mouse LIF Recombinant Protein were added to M1 cells. IL-6 production was measured and the linear portion of the curve was used to calculate the ED_{50} .

Storage: Mouse LIF Recombinant Protein is supplied as lyophilized material that is very stable at -20°C . It is recommended to reconstitute with sterile 10mM acetic acid at a concentration of 0.1 mg/mL which can be further diluted in aqueous solutions as needed. Addition of a carrier protein (0.1% HSA or BSA) is recommended for long-term storage.

Background References:

- (1) Mathieu, M.E. et al. (2012) *Stem Cell Rev Rep* 8, 1-15.
- (2) Broholm, C. and Pedersen, B.K. (2010) *Exerc Immunol Rev* 16, 77-85.
- (3) Cao, W. et al. (2011) *Immunity* 35, 273-84.
- (4) Ullah, U. et al. (2012) *Sci Rep* 2, 464.

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