

Store at
-20°C

Human LIF Recombinant Protein

Cell Signaling
TECHNOLOGY®

#62226

25 µg

New 04/21

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orders@cellsignal.comEntrez-Gene ID #3976
UniProt ID #P15018

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).

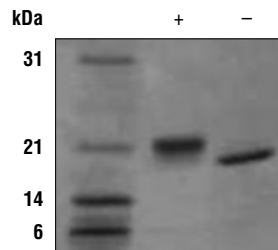
Molecular Weight: 19.8 kDa

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

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

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

Bioactivity: The bioactivity of recombinant hLIF was determined in a TF-1 cell proliferation assay. The ED₅₀ of each lot is ≤ 200 pg/ml.



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

Storage: Human LIF Recombinant Protein is supplied as lyophilized material that is very stable at -20°C. It is recommended to reconstitute with sterile 10 mM 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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Applications: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide **Species Cross-Reactivity:** H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—Horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.