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Human LIF Recombinant Protein

25 µg

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For Research Use Only. Not for Use in Diagnostic Procedures.**MW (kDa):**
19.8**UniProt ID:**
#P15018**Entrez-Gene Id:**
3976**Background**

Leukemia Inhibitory Factor (LIF) is a 20 kDa pleiotrophic 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).

Endotoxin

Endotoxin levels are less than or equal to 1 EU / 1 µg hLIF.

Purity

A greater than or equal to 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 less than or equal to 200 pg/ml.

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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