

#12031
Store at +4C**SignalKine™ Human LIF
Chemiluminescent Sandwich ELISA Kit****Orders:** 877-616-CELL (2355)
orders@cellsignal.com**Support:** 877-678-TECH (8324)**Web:** info@cellsignal.com
cellsignal.com**Species Cross Reactivity:** H
UniProt ID: #P15018
Entrez-Gene ID: #3976

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

For Research Use Only. Not for Use in Diagnostic Procedures.

| Product Includes | Product # | Quantity | Color | Storage Temp |
|---------------------------|-----------|----------|-----------|--------------|
| ELISA Wash Buffer (20X) | 9801 | 25 ml | Colorless | +4C |
| Luminol/Enhancer Solution | 84850 | 3 ml | Colorless | RT |
| Stable Peroxide Buffer | 42552 | 3 ml | Colorless | RT |
| Sealing Tape | 54503 | 2 ea | | +4C |

Description

SignalKine™ Human LIF Chemiluminescent Sandwich ELISA Kit from Cell Signaling Technology (CST) is a solid phase sandwich enzyme-linked immunosorbent assay (ELISA) that detects human LIF (hLIF) in multiple matrices. Unknown samples being tested for hLIF and hLIF standards are added to low volume microwells, where the hLIF is captured by the coated hLIF Rabbit mAb. Following a washing step, a biotinylated hLIF Detection Rabbit mAb is added to detect the captured hLIF. HRP-linked Streptavidin is then used for detection of the biotinylated hLIF Detection Rabbit mAb. A chemiluminescent reagent is added for signal development. The magnitude of light emission, measured in relative light units (RLU), is proportional to the quantity of human hLIF in the sample.

SignalKine™ Human LIF Chemiluminescent Sandwich ELISA Kit detects hLIF in multiple matrices that can be quantified by generating a standard curve with the recombinant hLIF protein standard provided. The hLIF standard range is from 12.3 to 9000 pg/ml. Samples containing higher levels of hLIF can be diluted to fit into the standard range.

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 composed 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 promotes 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).

Background References

1. Mathieu, M.E. et al. (2012) *Stem Cell Rev* 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.

Trademarks and Patents

Cell Signaling Technology is a trademark of Cell Signaling Technology, Inc.

All other trademarks are the property of their respective owners. Visit cellsignal.com/trademarks for more information.

Limited Uses

Except as otherwise expressly agreed in a writing signed by a legally authorized representative of CST, the following terms apply to Products provided by CST, its affiliates or its distributors. Any Customer's terms and conditions that are in addition to, or different from, those contained herein, unless separately accepted in writing by a legally authorized representative of CST, are rejected and are of no force or effect.

Products are labeled with For Research Use Only or a similar labeling statement and have not been approved, cleared, or licensed by the FDA or other regulatory foreign or domestic entity, for any purpose. Customer shall not use any Product for any diagnostic or therapeutic purpose, or otherwise in any manner that conflicts with its labeling statement. Products sold or licensed by CST are provided for Customer as the end-user and solely for research and development uses. Any use of Product for diagnostic, prophylactic or therapeutic purposes, or any purchase of Product for resale (alone or as a component) or other commercial purpose, requires a separate license from CST. Customer shall (a) not sell, license, loan, donate or otherwise transfer or make available any Product to any third party, whether alone or in combination with other materials, or use the Products to manufacture any commercial products, (b) not copy, modify, reverse engineer, decompile, disassemble or otherwise

attempt to discover the underlying structure or technology of the Products, or use the Products for the purpose of developing any products or services that would compete with CST products or services, (c) not alter or remove from the Products any trademarks, trade names, logos, patent or copyright notices or markings, (d) use the Products solely in accordance with CST Product Terms of Sale and any applicable documentation, and (e) comply with any license, terms of service or similar agreement with respect to any third party products or services used by Customer in connection with the Products.

Revision 1

#12031

SignalKine™ Human LIF Chemiluminescent Sandwich ELISA Kit

