


#11928
Store at +4C

SignalKine™ Human LIF Sandwich ELISA Kit



Species Cross Reactivity: H

UniProt ID: #P15018

Entrez-Gene Id: #3976

Orders: 877-616-CELL (2355)
orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com
cellsignal.com

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
TMB Substrate	7004	6 ml	Colorless	+4C
STOP Solution	7002	6 ml	Colorless	+4C
Sealing Tape	54503	2 ea		+4C

Kit contents scale proportionally with size, except sealing tape.

Example: The V1 kit contains 5X the listed quantities above, but will exclude the sealing tape.

The microwell plate is supplied as 12 8-well modules - Each module is designed to break apart for 8 tests.

Description

SignalKine™ Human LIF 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 Rabbit mAb is added to detect the captured hLIF. HRP-linked Streptavidin is then used for detection of the biotinylated hLIF Detection Rabbit mAb. HRP substrate, TMB, is added for color development. The magnitude of absorbance for this developed color is proportional to the quantity of hLIF in the sample.

SignalKine™ Human LIF Sandwich ELISA Kit detects hLIF in multiple matrices that be quantified by generating a standard curve with the recombinant hLIF protein standard provided. The hLIF standard range is from 31.25 to 2000 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 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).

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.

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Revision 1

#11928

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