**BACKGROUND**

Embryonic stem (ES) cells are the focus of much research and represent great therapeutic potential as they can be propagated indefinitely in an undifferentiated state while possessing the ability to differentiate into all embryonic germ layers (endoderm, ectoderm and mesoderm) both in vivo and in vitro. LIF (leukemia inhibitory factor), also known as MLPLI (melanoma-derived LPL inhibitor), HILDA, DIA or CDF, is a 202 amino acid secreted protein and lymphoid factor that participates in the maintenance of ES cell pluripotency by suppressing spontaneous ES cell differentiation. Secreted LIF precursor is further processed into a biologically active glycoprotein. Expressed by a wide variety of cells including activated T lymphocytes, monocytes, mast cells and neuronal cells, LIF is suggested to promote survival and growth of axons in vitro and is involved in immune tolerance at the maternal-fetal interface. LIF may also participate in fat and bone metabolism and regulate epithelial conversion during kidney development.

**CHROMOSOMAL LOCATION**

Genetic locus: LIF (human) mapping to 22q12.2; LIF (mouse) mapping to 11A1.

**SOURCE**

LIF (N-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of LIF of human origin.

**PRODUCT**

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-1336 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

**APPLICATIONS**

LIF (N-18) is recommended for detection of precursor and mature LIF of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation (1-2 µg per 100-500 µg of total protein (1 ml of cell lysate), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

LIF (N-18) is also recommended for detection of precursor and mature LIF in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for LIF siRNA (h): sc-37222, LIF siRNA (m): sc-37223, LIF shRNA Plasmid (h): sc-37222-SH, LIF shRNA Plasmid (m): sc-37223-SH, LIF shRNA (h) Lentiviral Particles: sc-37222-V and LIF shRNA (m) Lentiviral Particles: sc-37223-V.

Molecular Weight of LIF precursor: 22 kDa.

Molecular Weight of mature glycosylated LIF: 40-45 kDa.

Positive Controls: PC-12 cell lysate: sc-2250 or JAR cell lysate: sc-2276.

**RESEARCH USE**

For research use only, not for use in diagnostic procedures.

**SELECT PRODUCT CITATIONS**


