

DESCRIPTION

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| Species Reactivity | Human |
| Specificity | Detects human LIF in direct ELISAs and Western blots. In direct ELISAs and Western blots, no cross-reactivity with recombinant mouse LIF, recombinant human (rh) CLC, rhCNTF, rhCardiotrophin-1, rhIL-6, rhIL-11, or rhOSM is observed. |
| Source | Monoclonal Mouse IgG ₁ Clone # 9808 |
| Purification | Protein A or G purified from hybridoma culture supernatant |
| Immunogen | <i>E. coli</i> -derived recombinant human LIF |
| Conjugate | Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 nm |
| Formulation | Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions. |

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

| | Recommended Concentration | Sample |
|---|----------------------------------|---|
| Intracellular Staining by Flow Cytometry | 0.25-1 µg/10 ⁶ cells | HepG2 human hepatocellular carcinoma cell line fixed with paraformaldehyde and permeabilized with saponin |

PREPARATION AND STORAGE

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| Shipping | The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below. |
| Stability & Storage | Protect from light. Do not freeze. ● 12 months from date of receipt, 2 to 8 °C as supplied. |

BACKGROUND

LIF is a 36-67 kDa highly glycosylated polypeptide (1, 2) produced by a variety of cells including T cells (3), monocytes (4), fibroblasts (5), osteoblasts (6) and mast cells (7). Consistent with its many synonyms, LIF exhibits a broad spectrum of effects on both hematopoietic and nonhematopoietic cells. For example, LIF inhibits the differentiation of embryonic stem cells (8), up regulates the synthesis of acute phase proteins in hepatocytes (9), down regulates lipoprotein lipase activity in adipocytes (10), and preferentially induces a cholinergic phenotype in sympathetic neurons (11). The receptor for LIF (LIF R) has been isolated and found to be a 190 kDa type I transmembrane glycoprotein (12). Although this molecule binds LIF, the resultant LIF-LIF R complex is not sufficient to transduce an intracellular signal. This capability is provided by a 130 kDa signal transducing subunit (gp130) that is common to the functional receptors for IL-6, IL-11, CNTF, and Oncostatin M (13, 14). Since gp130 is a ubiquitously expressed membrane protein, the presence of LIF R (membrane-bound or soluble form) ultimately determines the cell's responsiveness to LIF. Cells known to express LIF R include osteoblasts (6), hepatocytes (15), macrophages (15), neurons (5), and megakaryocytes (16). Human and mouse LIF exhibit 78% sequence homology, and human LIF is biologically active on mouse cells.

References:

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