R&D SYSTEMS
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Human LIF Antibody

Monoclonal Mouse IgG_1 Clone # 9808

Catalog Number: MAB2501

DESCRIPTION

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	*E. coli*-derived recombinant human LIF
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.

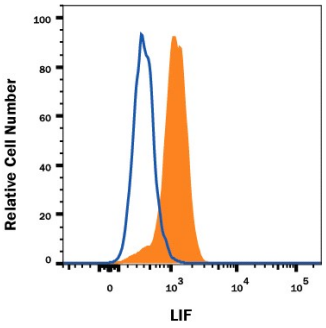
APPLICATIONS

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
Western Blot	1 µg/mL	Recombinant Human LIF
Intracellular Staining by Flow Cytometry	0.25 µg/10^6 cells	See Below
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	

DATA

Intracellular Staining by Flow Cytometry



Detection of LIF in HepG2 Human Cell Line by Flow Cytometry. HepG2 human hepatocellular carcinoma cell line was stained with Mouse Anti-Human LIF Monoclonal Antibody (Catalog # MAB2501, filled histogram) or isotype control antibody (Catalog # MAB002, open histogram) followed by APC-conjugated Goat anti-Mouse IgG Secondary Antibody (Catalog # F0101B). To facilitate intracellular staining, cells were fixed and permeabilized with FlowX FoxP3 Fixation & Permeabilization Buffer Kit (Catalog # FC012). View our protocol for Staining Intracellular Molecules.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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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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