

DESCRIPTION

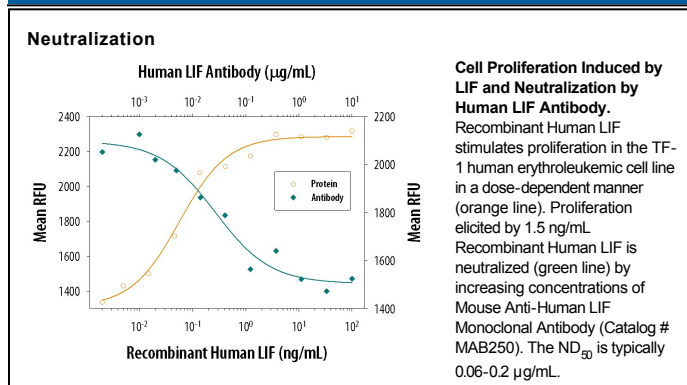
Species Reactivity	Human
Specificity	Detects human LIF in ELISAs and Western blots. In sandwich immunoassays, no significant cross-reactivity or interference with recombinant human (rh) IL-1 α , rhIL-1 β , rhIL-2, rhIL-3, rhIL-4, rhIL-6, rhIL-7, rhIL-8, rhG-CSF, rhGM-CSF, rhOSM, rhTGF- β 1, rhTNF- α , rhTNF- β , recombinant mouse (rm) IL-1 β , rmIL-3, rmIL-4, rmIL-5, rmIL-6, rmIL-7, rmGM-CSF, bovine (b) FGF acidic, bFGF basic, human (h) PDGF, porcine (p) PDGF, hTGF- β 1, pTGF- β 1.2, or pTGF- β 2 is observed.
Source	Monoclonal Mouse IgG _{2B} Clone # 9824
Purification	Protein A or G purified from ascites
Immunogen	<i>E. coli</i> -derived recombinant human LIF
Endotoxin Level	<0.10 EU per 1 μ g of the antibody by the LAL method.
Formulation	Lyophilized from a 0.2 μ m filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 μ m 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
Immunohistochemistry	8-25 μ g/mL	Immersion fixed paraffin-embedded sections of human lung
Human LIF Sandwich Immunoassay		Reagent
ELISA Capture	2-8 μ g/mL	Human LIF Antibody (Catalog # MAB250)
ELISA Detection	0.1-0.4 μ g/mL	Human LIF Biotinylated Antibody (Catalog # BAF250)
Neutralization	Measured by its ability to neutralize LIF-induced proliferation in the TF-1 human erythroleukemic cell line. Kitamura, T. <i>et al.</i> (1989) <i>J. Cell Physiol.</i> 140 :323. The Neutralization Dose (ND ₅₀) is typically 0.06-0.2 μ g/mL in the presence of 1.5 ng/mL Recombinant Human LIF. Human LIF Affinity-purified Polyclonal Antibody (Catalog # AF-250-NA) is recommended for neutralization.	

DATA



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 $^{\circ}$ C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 $^{\circ}$C as supplied. ● 1 month, 2 to 8 $^{\circ}$C under sterile conditions after reconstitution. ● 6 months, -20 to -70 $^{\circ}$C under sterile conditions after reconstitution.

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 (17).

References:

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