

**DESCRIPTION**

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human LIF in direct ELISAs. In direct ELISAs, less than 45% cross-reactivity with recombinant mouse LIF and less than 15% cross-reactivity with recombinant rat LIF is observed.
<b>Source</b>	Polyclonal Goat IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	<i>E. coli</i> -derived recombinant human LIF Ser23-Phe202 Accession # P15018
<b>Endotoxin Level</b>	<0.10 EU per 1 µg of the antibody by the LAL method.
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

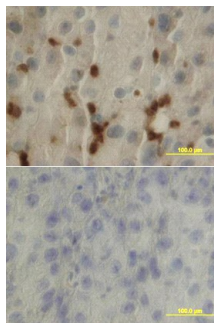
**APPLICATIONS**

**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.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Immunohistochemistry</b>	5-15 µg/mL	See Below
<b>Neutralization</b>	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> <b>140</b> :323. The Neutralization Dose (ND <sub>50</sub> ) is typically 0.04-0.08 µg/mL in the presence of 3 ng/mL Recombinant Human LIF.	

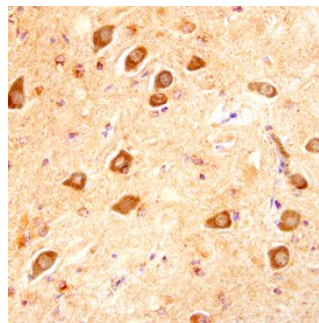
**DATA**

**Immunohistochemistry**



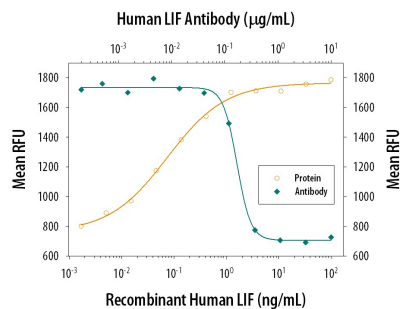
**LIF in Human Lung.** LIF was detected in immersion fixed paraffin-embedded sections of human lung array using Goat Anti-Human LIF Antigen Affinity-purified Polyclonal Antibody (Catalog # AF-250-NA) at 25 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). Lower panel shows a lack of labeling if primary antibodies are omitted and tissue is stained only with secondary antibody followed by incubation with detection reagents. View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

**Immunohistochemistry**



**LIF in Human Alzheimer's Brain.** LIF was detected in immersion fixed paraffin-embedded sections of human Alzheimer's brain using Goat Anti-Human LIF Antigen Affinity-purified Polyclonal Antibody (Catalog # AF-250-NA) at 10 µg/mL overnight at 4 °C. Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using Antigen Retrieval Reagent-Basic (Catalog # CTS013). Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). Specific staining was localized to neuronal cytoplasm. View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

**Neutralization**



**Cell Proliferation Induced by LIF and Neutralization by Human LIF Antibody.** Recombinant Human LIF (Catalog # 7734-LF) stimulates proliferation in the TF-1 human erythroleukemic cell line in a dose-dependent manner (orange line), as measured by Resazurin (Catalog # AR002). Proliferation elicited by 3 ng/mL Recombinant Human LIF is neutralized (green line) by increasing concentrations of Goat Anti-Human LIF Antigen Affinity-purified Polyclonal Antibody (Catalog # AF-250-NA). The ND<sub>50</sub> is typically 0.04-0.08 µg/mL.

#### PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.2 mg/mL in sterile PBS.
<b>Shipping</b>	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
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"><li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li><li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li><li>● 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li></ul>

#### BACKGROUND

LIF (Leukemia inhibitory factor; also Differentiation-stimulating factor) is a 22 kDa (predicted) glycoprotein, member of the leukemia inhibitory factor/interleukin-6 (LIF/IL-6) family of cytokines. Natural LIF is heavily glycosylated, showing an apparent molecular weight of 32 kDa to 62 kDa, it is produced by a variety of cells including T cells, monocytes, fibroblasts, osteoblasts and mast cells. LIF induces hematopoietic differentiation in normal and myeloid leukemia cells, neuronal cell differentiation and stimulation of acute-phase protein synthesis in hepatocytes. Human LIF acts through a receptor comprising a 190 kDa LIF-binding  $\alpha$ -chain and a 130 kDa signal-transducing  $\beta$ -chain (gp130), which is shared with the other members of the IL-6 family. Human and mouse LIF exhibit 78% aa sequence identity.