**DESCRIPTION**

**Species Reactivity**  Human  

**Specificity**  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.

**Source**  Polyclonal Goat IgG  

**Purification**  Antigen Affinity-purified  

**Immunogen**  E. coli-derived recombinant human LIF  

**Ser23-Phe202**  

**Accession #**  P15018  

**Endotoxin Level**  <0.10 EU per 1 μg of the antibody by the LAL method.  

**Formulation**  Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.  

**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.

<table>
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<tr>
<th>Recommended Concentration</th>
<th>Sample</th>
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<td>5-15 μg/mL</td>
<td>See Below</td>
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**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.

**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 # AR032). 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 ND50 is typically 0.04-0.08 μg/mL.

**DATA**

**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.
**PREPARATION AND STORAGE**

**Reconstitution**
Reconstitute at 0.2 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.

**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 α-chain and a 130 kDa signal-transducing β-chain (gp130), which is shared with the other members of the IL-6 family. Human and mouse LIF exhibit 78% aa sequence identity.