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# Product Information

**Anti-Leukemia Inhibitory Factor**
produced in goat, affinity isolated antibody

Catalog Number **L1169**

## Product Description

Anti-Leukemia inhibitory factor (rhLIF) is produced in goats immunized with purified, *E. coli*-derived, recombinant human leukemia inhibitory factor (GeneID 3976). LIF specific IgG was purified by human LIF affinity chromatography.

Anti-Leukemia inhibitory factor recognizes human leukemia inhibitory factor. Applications include immunoblotting, immunohistochemistry and neutralization of rhLIF. Based on western blot results, this antibody shows less than 30% cross-reactivity with rmLIF.

Leukemia inhibitory factor is a multifunctional glycoprotein that induces macrophage differentiation and suppresses the proliferation of the murine M1 myeloid cell line.[1]

## Reagent

Supplied lyophilized from a 0.2 μm filtered solution of phosphate buffered saline containing 5% trehalose.

## Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

## Preparation Instructions

To one vial of lyophilized powder, add 1 mL of 0.2 µm filtered PBS to produce a 0.1 mg/mL stock solution. If aseptic technique is used, no further filtration should be needed for use in cell culture environments.

## Storage/Stability

Prior to reconstitution, store at –20 °C. The reconstituted product may be stored at 2-8 °C for up to one month. For extended storage, freeze in working aliquots at –20 °C. Repeated freezing and thawing, or storage in “frost-free” freezers, is not recommended.

## Product Profile

Immunoblotting: a working concentration of 0.1 μg/mL is recommended. The detection limit for recombinant human LIF is ~5.0 ng/lane under non-reducing and reducing conditions.

Immunohistochemistry: a working concentration of 5-15 µg/mL is recommended for use.

Neutralization: To measure the ability of the antibody to neutralize the bioactivity of rhLIF on human TF-1 cells, rhLIF was incubated with various concentrations of the antibody for 1 hour at 37° C in a 96 well microplate. Following this preincubation period, TF-1 cells were added. The assay mixture in a total volume of 100 µL, containing antibody at the concentrations of 0.001-10.0 μg/mL, rhLIF at 1.5 ng/mL and cells at $1.0 \times 10^5$ cells/mL, was incubated at 37° C for 48 hours in a humidified $CO_2$ incubator. $^3$H-thymidine was added during the final 4 hours of incubation. The cells were subsequently harvested onto glass fiber filters and the $^3$H-thymidine incorporated into DNA was determined.

The Neutralization $Dose_{50}$ ($ND_{50}$) for this antibody is defined as that concentration of antibody required to yield one-half maximal inhibition of the cytokine activity on a responsive cell line, when that cytokine is present at a concentration just high enough to elicit a maximum response.

**Note**: In order to obtain the best results using various techniques and preparations, we recommend determining the optimal working dilutions by titration.

Endotoxin: < 10 ng/mg antibody as determined by the LAL method.

**References** SC,PHC 06/11-1

1. Gearing, D., et al., *EMBO J.*, **6**, 3995 (1987).
2. Moreau, F.J., et al., *Nature*, **336**, 690 (1988).