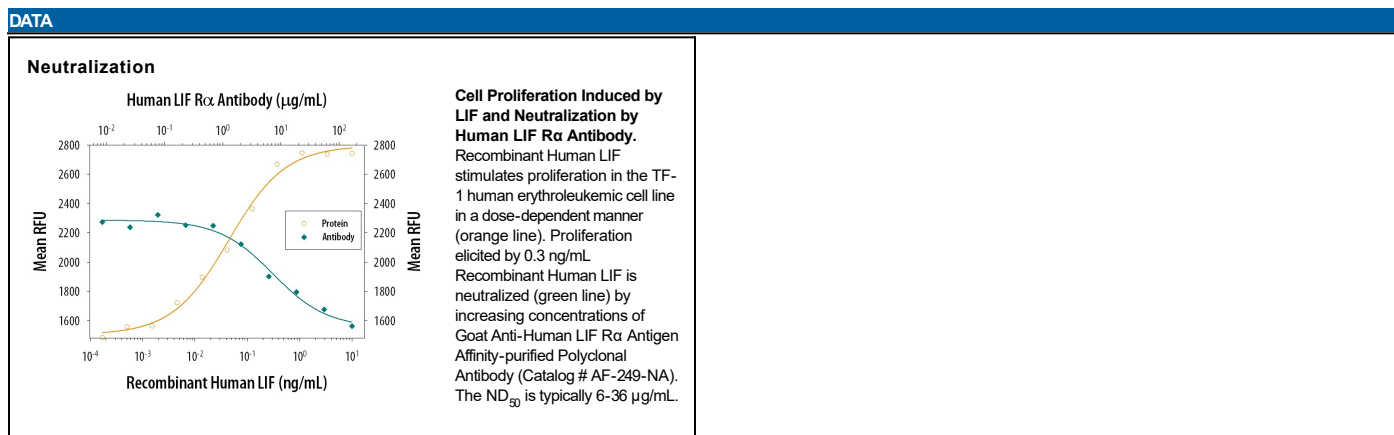


DESCRIPTION	
Species Reactivity	Human
Specificity	Detects human LIF R α in direct ELISAs and Western blots. In direct ELISAs, approximately 7% cross-reactivity with recombinant mouse LIF R α is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	<i>S. frugiperda</i> insect ovarian cell line Sf 21-derived recombinant human LIF R α Gln45-Ser833 Accession # P42702
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 either lyophilized or as a 0.2 μ m filtered solution in PBS.

APPLICATIONS	
Please Note: Optimal dilutions should be determined by each laboratory for each application. <i>General Protocols</i> are available in the <i>Technical Information</i> section on our website.	
	Recommended Concentration Sample
Western Blot	0.1 μ g/mL Recombinant Human LIF R α (Catalog # 249-LR/CF)
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 6-36 μ g/mL in the presence of 0.3 ng/mL Recombinant Human LIF.



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. <ul style="list-style-type: none"> ● 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

The activities of the pleiotropic cytokine LIF are mediated through a high-affinity heterodimeric receptor complex consisting of two membrane glycoproteins: an α subunit (LIF R α , also known as LIF R β and CD118) that binds LIF with low affinity and the 130 kDa (gp130) subunit that does not bind LIF by itself, but is required for high-affinity binding of LIF by the complex. The gp130 subunit was first described as the signal transducing subunit of the high-affinity IL-6 receptor complex. Besides LIF, the high-affinity heterodimeric LIF receptor complex has been shown to mediate the activities of oncostatin M (OSM), cardiotrophin-1 and ciliary neurotrophic factor (CNTF).

Human LIF R α cDNA encodes a 1097 amino acid (aa) residue precursor type I membrane protein with a 44 aa residue signal peptide, a 789 aa residue extracellular domain, a 26 aa residue transmembrane domain, and a 238 aa residue cytoplasmic domain. LIF R α is a member of the cytokine receptor family and has extensive homology to gp130. The extracellular domain of LIF R α has two cytokine receptor domains and three fibronectin type III repeats. In mouse, mRNAs encoding a soluble LIF R α and lacking transmembrane and intracellular domains, have been isolated. Soluble LIF R α has been shown to bind LIF and has LIF antagonistic activity.

References:

1. Bazan, J.F. (1990) Proc. Natl. Acad. Sci. USA **87**:6934.
2. Gearing, D.P. (1994) *Guidebook to Cytokines and Their Receptors*, Academic Press, p130.
3. Pennica D. *et al.* (1995) J. Biol. Chem. **270**:10915.