

**DESCRIPTION**

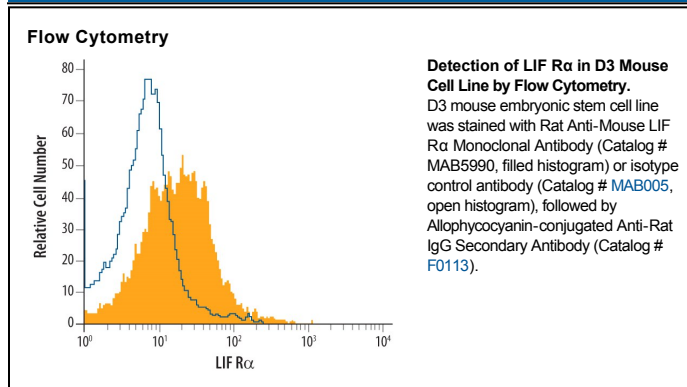
<b>Species Reactivity</b>	Mouse
<b>Specificity</b>	Detects mouse LIF R $\alpha$ in direct ELISAs. In direct ELISAs, no cross-reactivity with recombinant human LIF R $\alpha$ is observed.
<b>Source</b>	Monoclonal Rat IgG <sub>1</sub> Clone # 673602
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant mouse LIF R $\alpha$ Leu44-Ser828 Accession # P42703
<b>Formulation</b>	Lyophilized from a 0.2 $\mu$ m filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 $\mu$ 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.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Flow Cytometry</b>	0.25 $\mu$ g/10 <sup>6</sup> cells	See Below
<b>CyTOF-ready</b>	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	

**DATA**



**PREPARATION AND STORAGE**

<b>Reconstitution</b>	Sterile PBS to a final concentration of 0.5 mg/mL.
<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**

Leukemia Inhibitory Factor Receptor alpha (LIF R $\alpha$ ), also known as LIFR beta and CD118, is a 190 kDa type I transmembrane protein in the Interleukin-6 receptor family. Members of this family mediate the biological effects of Cardiotrophin-1, CLC, CNTF, IL-6, IL-11, IL-27, and Oncostatin M (1). Mature mouse LIF R $\alpha$  consists of a 785 amino acid (aa) extracellular domain (ECD) with two cytokine receptor homology domains, one WSxWS motif, and three fibronectin type III repeats, followed by a 25 aa transmembrane segment and a 239 aa cytoplasmic domain (2, 3). Within the ECD, mouse LIF R $\alpha$  shares 73% and 90% aa sequence identity with human and rat LIF R $\alpha$ , respectively. Alternative splicing generates a 90 kDa soluble form of the mouse LIF R $\alpha$  ECD (4). LIF R $\alpha$  binds the pleiotropic cytokine LIF with low affinity, and the soluble isoform retains LIF-binding activity (5). Binding affinity is increased by the ligand-induced association of LIF R $\alpha$  with the signal transducing subunit gp130 (6, 7). The LIF R $\alpha$ /gp130 receptor complex also transduces Oncostatin M signals, although LIF R $\alpha$  alone does not interact with Oncostatin M (6). gp130 associates with different ligand-specific receptors to form signaling receptor complexes for the other IL-6 family ligands (1). The CNTF receptor is a ternary complex that contains CNTF R $\alpha$  and gp130 as well as LIF R $\alpha$  (8, 9). LIF R $\alpha$  is widely expressed, and LIF induces the proliferation, differentiation, and activation of cells in many tissues (10, 11). In particular, LIF R $\alpha$  plays an important role in several aspects of early pregnancy such as blastocyst implantation in the uterus (4, 12-14).

**References:**

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