

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse LIF R α in direct ELISAs. In direct ELISAs, no cross-reactivity with recombinant human LIF R α is observed.
Source	Monoclonal Rat IgG ₁ Clone # 673602
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse LIF R α Leu44-Ser828 Accession # P42703
Conjugate	Alexa Fluor 647 Excitation Wavelength: 650 nm Emission Wavelength: 668 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

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.

	Recommended Concentration	Sample
Flow Cytometry	0.25-1 μ g/10 ⁶ cells	D3 mouse embryonic stem cell line

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. <ul style="list-style-type: none"> 12 months from date of receipt, 2 to 8 °C as supplied.

BACKGROUND

Leukemia Inhibitory Factor Receptor alpha (LIF R α), 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 α 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 α shares 73% and 90% aa sequence identity with human and rat LIF R α , respectively. Alternative splicing generates a 90 kDa soluble form of the mouse LIF R α ECD (4). LIF R α 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 α with the signal transducing subunit gp130 (6, 7). The LIF R α /gp130 receptor complex also transduces Oncostatin M signals, although LIF R α 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 α and gp130 as well as LIF R α (8, 9). LIF R α is widely expressed, and LIF induces the proliferation, differentiation, and activation of cells in many tissues (10, 11). In particular, LIF R α 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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