Mouse LIF Rα Alexa Fluor® 700-conjugated Antibody

Monoclonal Rat IgG_1 Clone # 673602

Catalog Number: FAB5990N

100 µg

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse LIF Rα in direct ELISAs. In direct ELISAs, no cross-reactivity with recombinant human LIF Rα 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 Rα Leu44-Ser828 Accession # P42703
Conjugate	Alexa Fluor 700 Excitation Wavelength: 675-700 nm Emission Wavelength: 723 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 µg/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.** ● 12 months from date of receipt, 2 to 8 °C as supplied.

BACKGROUND

Leukemia Inhibitory Factor Receptor alpha (LIF Rα), 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 Rα 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 Rα shares 73% and 90% aa sequence identity with human and rat LIF Rα, respectively. Alternative splicing generates a 90 kDa soluble form of the mouse LIF Rα ECD (4). LIF Rα 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 Rα with the signal transducing subunit gp130 (6, 7). The LIF Rα/gp130 receptor complex also transduces Oncostatin M signals, although LIF Rα 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 Rα and gp130 as well as LIF Rα (8, 9). LIF Rα is widely expressed, and LIF induces the proliferation, differentiation, and activation of cells in many tissues (10, 11). In particular, LIF Rα plays an important role in several aspects of early pregnancy such as blastocyst implantation in the uterus (4, 12-14).

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