

DESCRIPTION

Source Human embryonic kidney cell, HEK293-derived cynomolgus monkey LIFR alpha protein
Gln45-Ser833, with a C-terminal 6-His tag
Accession # XP_005556818.1

N-terminal Sequence Analysis Gln45 (blocked); deduced from Lys46 upon deblocking

Predicted Molecular Mass 90 kDa

SPECIFICATIONS

SDS-PAGE 113-132 kDa, under reducing conditions

Activity Measured by its ability to inhibit LIF-dependent proliferation of TF-1 human erythroleukemic cells. Kitamura, T. *et al.* (1989) J. Cell Physiol. 140:323.
The ED₅₀ for this effect is typically 0.7-7 µg/mL in the presence of 0.3 ng/mL of recombinant human LIF.

Endotoxin Level <0.10 EU per 1 µg of the protein by the LAL method.

Purity >95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.

Formulation Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution Reconstitute at 500 µg/mL in PBS.

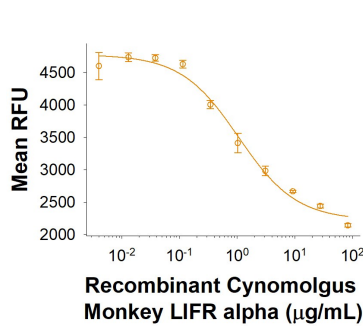
Shipping The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 3 months, -20 to -70 °C under sterile conditions after reconstitution.

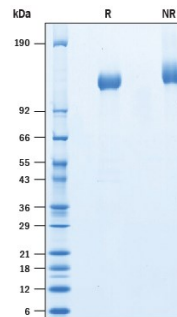
DATA

Bioactivity



Measured by its ability to inhibit LIF-dependent proliferation of TF-1 human erythroleukemic cells. The ED₅₀ for this effect is typically 0.7-7 µg/mL in the presence of 0.3 ng/mL of recombinant human LIF.

SDS-PAGE



2 µg/lane of Recombinant Cynomolgus LIFR alpha His-tag Protein (Catalog # 10529-LR) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 113-150 kDa.

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). Based on its similarity with human LIF R α , mature cynomolgus LIF R α is predicted to consist of a 789 amino acid (aa) extracellular domain (ECD) with two cytokine receptor homology domains, one WSxWS motif, and three fibronectin type III repeats, followed by a 26 aa transmembrane segment and a 238 aa cytoplasmic domain (2). Within the ECD, cynomolgus LIF R α shares 97% aa sequence identity with human LIF R α . LIF R α binds the pleiotropic cytokine LIF with low affinity (3). Binding affinity is increased by the ligand-induced association of LIF R α with the signal transducing subunit gp130 (4, 6). The LIF R α /gp130 receptor complex also transduces Oncostatin M signals, although LIF R α alone does not interact with Oncostatin M (4). 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 (6, 7). LIF R α is widely expressed, and LIF induces the proliferation, differentiation, and activation of cells in many tissues (8, 9). In particular, LIF R α plays an important role in several aspects of early pregnancy such as blastocyst implantation in the uterus (10-12).

References:

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