Active Recombinant Mouse Lifr, His-tagged

Cat. No. Lifr-3295M **Lot. No.** (See product label)

SPECIFICATION

Product Overview	A DNA sequence encoding the extracellular domain of mouse LIFR (NP_038612.1) (Met 1-Ser 828) was expressed, with a polyhistidine tag at the C-terminus.
Species	Mouse
Source	Human Cells
ProteinLength	1-828 a.a.
Description	LIFR (leukemia inhibitory factor receptor) belongs to the family of cytokine receptors. LIFR forms a high-affinity receptor complex with gp130, which mediates the activity of LIF (leukemia inhibitory factor) and thus affects the differentiation, proliferation, and survival of a wide variety of cells in the adult and the embryo. Besides LIF, LIFR can also bind to and activate CNTF (ciliary neurotrophic factor) and CLC (cardiotrophin like cytokine). Evidence showed that in the retina, LIFR activating LIF, CT-1 and cardiotrophin like cytokine (CLC) are strongly upregulated in response to preconditioning with bright cyclic light leading to robust activation of signal transducer and activator of transcription-3 (STAT3) in a time-dependent manner. Further, blocking LIFR activation during preconditioning using a LIFR antagonist (LIF05) attenuated the induced STAT3 activation and also resulted in reduced preconditioning-induced protection of the retinal photoreceptors. These data demonstrate that LIFR and its ligands play an essential role in endogenous neuroprotective mechanisms triggered by preconditioning-induced stress. LIFR was newly found to be a suppressor of hepatocellular carcinoma (HCC), one of the world's

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	top five causes of cancer-related deaths.
Predicted N Terminal	Leu 44
Form	Lyophilized from sterile PBS, pH 7.4. Normally 5 % - 8 % trehalose and mannitol are added as protectants before lyophilization.
Bio-activity	1. Measured by its ability to bind mouse LIF-Fc in a functional ELISA.2. Measured by its ability to inhibit the recombinant human LIF mediated inhibition in the M1 mouse myeloid leukemia cells. The ED50 for this effect is typically 5-20 ng/mL in the presence of 2 ng/mL recombinant human LIF.
Molecular Mass	The recombinant mouse LIFR consists of 796 amino acids and has a predicted molecular mass of 90 kDa. In SDS-PAGE under reducing conditions, the apparent molecular mass of rm LIFR is approximately 110-120 kDa due to glycosylation.
Endotoxin	< 1.0 EU per μg of the protein as determined by the LAL method.
Purity	> 95 % as determined by SDS-PAGE.
Stability	Samples are stable for up to twelve months from date of receipt at -70ºC.
Storage	Store it under sterile conditions at -20ºC~-70ºC. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.

GENE INFORMATION

Gene Name	Lifr leukemia inhibitory factor receptor [Mus musculus (house mouse)]
Official Symbol	Lifr

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Synonyms	LIFR; leukemia inhibitory factor receptor; LIF-R; LIF receptor; D-factor/LIF receptor; leukemia inhibitory factor receptor alpha chain; soluble differentiation-stimulating factor receptor; LIF; AW061234; A230075M04Rik
Gene ID	16880
mRNA Refseq	NM_013584
Protein Refseq	NP_038612
UniProt ID	P42703
Chromosome Location	15 A1; 15 3.46 cM
Pathway	Adipogenesis; Cytokine-cytokine receptor interaction; ESC Pluripotency Pathways; Jak-STAT signaling pathway
Function	cytokine receptor activity; leukemia inhibitory factor receptor activity; protein binding

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