10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Anti-LIF Reference Antibody (MSC-1)

Recombinant Antibody
Catalog # APR10224

Product Information

Application	Functional assay, Kinetics (SPR), Kinetics (BLI), FACS, E, FTA
Primary Accession	P15018
Reactivity	Cynomolgus, Human, Mouse
Clonality	Monoclonal
Isotype	IgG1
Calculated MW	22008

Additional Information

Target/Specificity	LIF
Endotoxin	
Conjugation	Unconjugated
Expression system	CHO
Format	Purified monoclonal antibody supplied in PBS, pH6.0, without preservative.This antibody is purified through a protein A column.

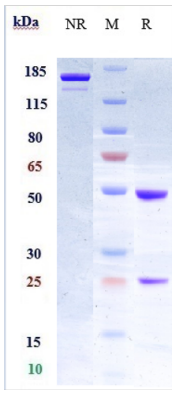
Protein Information

Name	LIF (HGNC:6596)
Synonyms	HILDA
Function	Functions as a cytokine that binds to the LIF receptor complex (PubMed:11294841, PubMed:14527405, PubMed:36930708). The LIF receptor complex indeed consists of two signaling receptor subunits IL6ST/gp130 and LIFR that transduce the signal into the cell (PubMed:14527405, PubMed:36930708). Functionally, regulates cell self- renewal, differentiation and survival of embryonic stem cells (ESCs) and is crucial for embryonic implantation (By similarity). Mechanistically, ligand binding to LIFR, induces heterodimerization with IL6ST/gp130 activating JAK tyrosine kinases (JAK1 or JAK2 and to a lesser extent TYK2) bound to their intracellular domains (PubMed:11294841). These kinases subsequently phosphorylate IL6ST/gp130 and LIFR (PubMed:11294841). The tyrosine phosphorylated signaling receptors serve in turn as docking sites for recruitment and activation of signal transducers and activators of transcription (STAT3 and to lesser extent STAT1) (PubMed:11294841). In parallel to the activation of the STAT3-pathway, the binding of LIF to the LIF receptor complex leads to the activation of the mitogen-activated protein kinase (MAPK) and the phosphatidylinositol 3-kinase (PI(3)K) pathways (PubMed:11294841). Tyrosine

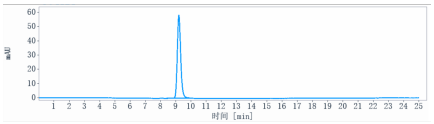
phosphorylation of the p85 subunit of PI(3)K by JAK1 leads to activation of the serine/ threonine kinase AKT (protein kinase B) (PubMed:11294841). PI(3)K-dependent signaling is required for efficient self-renewal of murine ES cells, and regulation of ERK activity is functionally important in this response (By similarity). Moreover, induces tyrosine phosphorylation of PTPN11, that associates with IL6ST/gp130-LIFR, which in turn recruits the p85 regulatory subunit of PI(3)K protein kinase, promoting PI3K-AKT activation, and GRB2-RAS-MAPK signaling (PubMed:11294841).

Cellular Location Secreted.

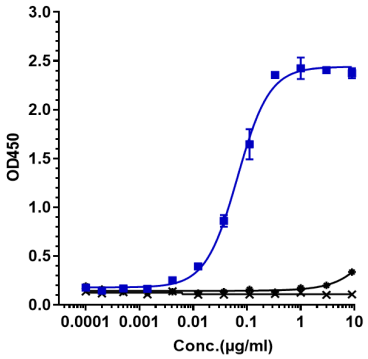
Images



Anti-LIF Reference Antibody (MSC-1) on SDS-PAGE under reducing (R) condition. The purity of the protein is greater than 95%.



The purity of Anti-LIF Reference Antibody (MSC-1) is 98.6%, determined by SEC-HPLC.



Immobilized human LIF His at 2 ug/mL can bind Anti-LIF Reference Antibody (MSC-1), EC50=0.06665 ug/mL.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.