LD Biopharma, Inc.
9924 Mesa Rim Road Suite B
San Diego, CA 92121
Tel: 858-876-8266
http://www.ldbiopharma.com

- PRODUCT DATA SHEET -

Name of Product: Recombinant Human Lin28-11R Protein
Catalog Number: hTF-0046
Manufacturer: LD Biopharma, Inc.

Introduction

Lin28 homolog A is a protein that in human is encoded by the lin28 gene. It is marker of undifferentiated human embryonic stem cells and has been used to enhance the efficiency of the formation of induced pluripotent stem (iPS) cells from human fibroblasts. It encodes a cytoplasmic mRNA-binding protein that binds to and enhances the translation of the Igf2 mRNA. Lin28 has been shown to bind to the let-7 pre-miRNA and block production of the mature let-7 microRNA in mouse embryonic stem cells.

Recombinant human Lin28-11R protein was constructed with C-terminal tag of 11 arginine domain, which will efficiently deliver protein intracellularly. This protein was expressed in E. coli as inclusion bodies, refolded using our unique "temperature shift inclusion body refolding" technology and chromatographically purified. Incubating this protein in various culture media at 2 – 8 µg/ ml may help to increase PiPS generation efficiency when combined with proteins Oct4-11R, Sox2-11R, Klf4-11R and cMyc-11R.

Gene Symbol:	Lin28
Accession Number:	NP_078950.1
Species:	Human
Size:	50 µg / Vial
Composition:	0.5 mg/ml, sterile-filtered, in 20 mM pH 8.0 Tris-HCl Buffer, with proprietary formulation of NaCl, KCl, EDTA, arginine, DTT and Glycerol.
Storage:	In Liquid. Keep at -20°C for long term storage. Product is stable at 4 °C for at least 7 days

Key References

Hongyan Zhou, et al. *Generation of induced pluripotent stem cells using recombinant protein*. Cell Stem Cell. Vol 4. Issue 5: 381-384 (2009)

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Vladimir Torchilin. *Intracellular delivery of protein and peptide therapeutics*. Drug Discovery Todays: Technologies. 01.002 (2009)

Junying Yu et al. *Induced Pluripotent Stem cell lines Derived from human somatic cells*. Science. 10.1126 (2007)

Applications

1. Protein transduction for enhancing PiPS generation efficiency.
2. Active protein, may be used for RNA/Protein binding assay.
3. As specific protein substrate for kinase assay or other in vitro assay.

Quality Control

1. Purity: > 90% by SDS-PAGE.

Recombinant Protein Sequence

MGSVSNQQFAGGCAKAAEEAPEEAPEDAARAADEPQLLHGAGICKWFNVRMGFGFLSMTARAGV
ALDPPVDVFVHQSKLHMEGFRSLKEGEAVEFTFKKSAKGLESIRVTGPGGVFCIGSERRPKGKS
MQKRRSKGDRCYNCGGLDHHAKECKLPPQPKKCHFCQSISHMVASCPLKAQQGPSAQGKPTYFR
EEEEEIHSPTLLPEAQNESGGGGSPGRRRRRRRRRR