OriGene Technologies, Inc.
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
https://www.origene.com
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

Product datasheet for MR202250

Lin28a (NM_145833) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Lin28a (NM_145833) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Lin28a
Synonyms:	AL024421; ENSMUSG00000070700; Gm10299; Lin-28; lin-28A; Lin28; Tex17
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

ORF Nucleotide Sequence:

>MR202250 representing NM_145833
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGGCTCGGTGTCCAACCAGCAGTTTGCAGGTGGCTGCGCCAAGGCAGCGGAGAAGGCGCCAGAGGAGG
CGCCGCCTGACGCGGCCCGAGCGGCAGACGAGCCGCAGCTGCTGCACGGGGCCGGCATCTGTAAGTGGTT
CAACGTGCGCATGGGGTTCGGCTTCCTGTCTATGACCGCCCGCGCTGGGGTCGCGCTCGACCCCCCGGTG
GACGTCTTTGTGCACCAGAGCAAGCTGCACATGGAAGGGTTCCGAAGCCTCAAGGAGGGTGAGGCGGTGG
AGTTCACCTTTAAGAAGTCTGCCAAGGGTCTGGAATCCATCCGTGTCACTGGCCCTGGTGGTGTGTTCTG
TATTGGGAGTGAGCGGCGGCCAAAAGGGAAGAACATGCAGAAGCGAAGATCCAAAGGAGACAGGTGCTAC
AACTGCGGTGGGCTAGACCATCATGCCAAGGAATGCAAGCTGCCACCCCAGCCCAAGAAGTGCCACTTTT
GCCAAAGCATCAACCATATGGTGGCCTCGTGTCCACTGAAGGCCCAGCAGGGCCCCAGTTCTCAGGGAAA
GCCTGCCTACTTCCGGGAGGAAGAGGAAGAGATCCACAGCCCTGCCCTGCTCCCAGAAGCCCAGAAT

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>MR202250 representing NM_145833
Red=Cloning site Green=Tags(s)

MGSVSNQQFAGGCAKAAEKAPEEAPPDAARAADEPQLLHGAGICKWFNVRMGFGFLSMTARAGVALDPPV
DVFVHQSKLHMEGFRSLKEGEAVEFTFKKSAKGLESIRVTGPGGVFCIGSERRPKGKNMQKRRSKGDRCY
NCGGLDHHAKECKLPPQPKKCHFCQSINHMVASCPLKAQQGPSSQGKPAYFREEEEEIHSPALLPEAQN

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

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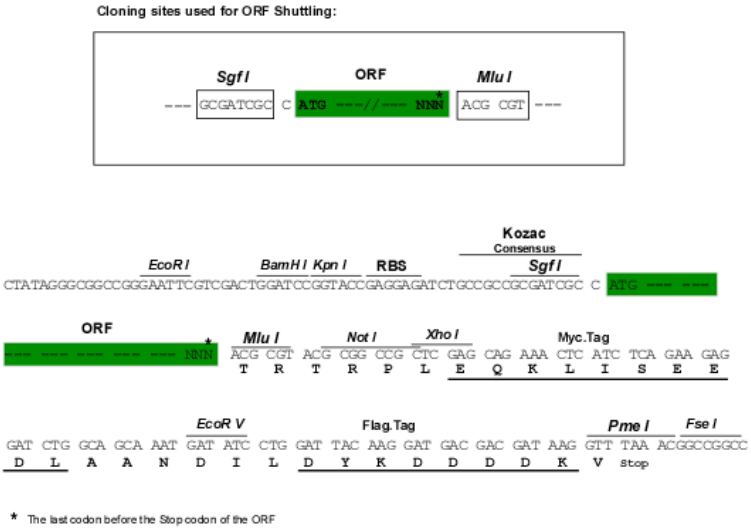
Chromatograms: https://cdn.origene.com/chromatograms/mm9032_g01.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_145833

ORF Size: 627 bp

OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. More info

OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:
1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

RefSeq: NM_145833.1, NP_665832.1

RefSeq Size: 3480 bp

RefSeq ORF: 630 bp

Locus ID: 83557

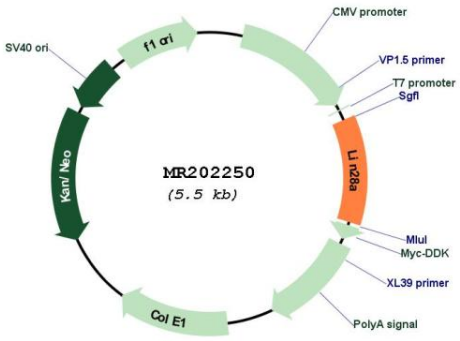
UniProt ID: Q8K3Y3

Cytogenetics: 4 D2.3

MW: 23.2 kDa

Gene Summary: RNA-binding protein that inhibits processing of pre-let-7 miRNAs and regulates translation of mRNAs that control developmental timing, pluripotency and metabolism (PubMed:17473174, PubMed:18604195, PubMed:18566191, PubMed:18292307, PubMed:19703396, PubMed:23102813, PubMed:24209617). Seems to recognize a common structural G-quartet (G4) feature in its miRNA and mRNA targets (PubMed:26045559). 'Translational enhancer' that drives specific mRNAs to polysomes and increases the efficiency of protein synthesis. Its association with the translational machinery and target mRNAs results in an increased number of initiation events per molecule of mRNA and, indirectly, in mRNA stabilization. Binds IGF2 mRNA, MYOD1 mRNA, ARBP/36B4 ribosomal protein mRNA and its own mRNA. Essential for skeletal muscle differentiation program through the translational up-regulation of IGF2 expression (PubMed:17473174). Suppressor of microRNA (miRNA) biogenesis, including that of let-7, miR107, miR-143 and miR-200c. Specifically binds the miRNA precursors (pre-miRNAs), recognizing an 5'-GGAG-3' motif found in pre-miRNA terminal loop, and recruits TUT4 and TUT7 uridylyltransferaseS. This results in the terminal uridylation of target pre-miRNAs. Uridylated pre-miRNAs fail to be processed by Dicer and undergo degradation. The repression of let-7 expression is required for normal development and contributes to maintain the pluripotent state by preventing let-7-mediated differentiation of embryonic stem cells (PubMed:19703396, PubMed:28671666). Localized to the periendoplasmic reticulum area, binds to a large number of spliced mRNAs and inhibits the translation of mRNAs destined for the ER, reducing the synthesis of transmembrane proteins, ER or Golgi lumen proteins, and secretory proteins (PubMed:23102813). Binds to and enhances the translation of mRNAs for several metabolic enzymes, such as PFKP, PDHA1 or SDHA, increasing glycolysis and oxidative phosphorylation. Which, with the let-7 repression may enhance tissue repair in adult tissue (PubMed:24209617).[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MR202250