

Product datasheet for **MR202250L4V**

Lin28a (NM_145833) Mouse Tagged ORF Clone Lentiviral Particle

Product data:

Product Type:	Lentiviral Particles
Product Name:	Lin28a (NM_145833) Mouse Tagged ORF Clone Lentiviral Particle
Symbol:	Lin28a
Synonyms:	AL024421; ENSMUSG00000070700; Gm10299; Lin-28; lin-28A; Lin28; Tex17
Mammalian Cell Selection:	Puromycin
Vector:	pLenti-C-mGFP-P2A-Puro (PS100093)
Tag:	mGFP
ACCN:	NM_145833
ORF Size:	627 bp
ORF Nucleotide Sequence:	The ORF insert of this clone is exactly the same as(MR202250).
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.
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



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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 PFKF, 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]