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

(DANRE) lin28a Antibody (Center)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP21562c

Product Information

Application	WB, E
Primary Accession	Q803L0
Reactivity	Zebrafish
Host	Rabbit
Clonality	polyclonal
Isotype	Rabbit IgG
Clone Names	RB53165
Calculated MW	21886

Additional Information

Gene ID	394066
Other Names	Protein lin-28 homolog A, Lin-28A, lin28a, lin28
Target/Specificity	This DANRE lin28a antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 85-119 amino acids from the Central region of DANRE lin28a.
Dilution	WB~~1:2000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	(DANRE) lin28a Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	lin28a
Synonyms	lin28
Function	RNA-binding protein that inhibits processing of pre-let-7 miRNAs and regulates translation of mRNAs that control developmental timing, pluripotency and metabolism. Seems to recognize a common structural G-quartet (G4) feature in its miRNA and mRNA targets (By similarity).

	'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. Suppressor of microRNA (miRNA) biogenesis, including that of let-7. Binds specific target miRNA precursors (pre-miRNAs), recognizing an 5'-GGAG-3' motif found in their terminal loop, and recruits uridylyltransferase. This results in the terminal uridylation of target pre-miRNAs. Uridylated pre-miRNAs fail to be processed by Dicer and undergo degradation (By similarity). 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. Binds to and enhances the translation of mRNAs for several metabolic enzymes, increasing glycolysis and oxidative phosphorylation. Which, with the let-7 repression may enhance tissue repair in adult tissue (By similarity).
Cellular Location	Cytoplasm {ECO:0000250|UniProtKB:Q8K3Y3}. Rough endoplasmic reticulum {ECO:0000250|UniProtKB:Q8K3Y3}. Cytoplasm, P-body {ECO:0000250|UniProtKB:Q9H9Z2}. Cytoplasm, Stress granule {ECO:0000250|UniProtKB:Q8K3Y3}. Nucleus, nucleolus {ECO:0000250|UniProtKB:Q8K3Y3}. Note=Predominantly cytoplasmic. In the cytoplasm, localizes to peri-endoplasmic reticulum regions and may be bound to the cytosolic surface of rough endoplasmic reticulum (ER) on which ER-associated mRNAs are translated. Shuttle from the nucleus to the cytoplasm requires RNA-binding. {ECO:0000250|UniProtKB:Q8K3Y3}

Background

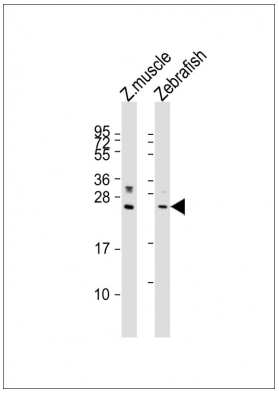
Acts as a 'translational enhancer', driving specific mRNAs to polysomes and thus increasing the efficiency of protein synthesis. Its association with the translational machinery and target mRNAs results in an increased number of initiation events per molecule of mRNA and, indirectly, in stabilizing the mRNAs. Acts as a suppressor of microRNA (miRNA) biogenesis by specifically binding the precursor let-7 (pre-let-7), a miRNA precursor. Acts by binding pre-let-7 and recruiting an uridylyltransferase, leading to the terminal uridylation of pre- let-7. Uridylated pre-let-7 miRNAs fail to be processed by Dicer and undergo degradation. Specifically recognizes the 5'-GGAG-3' motif in the terminal loop of pre-let-7. Also recognizes and binds non pre-let-7 pre-miRNAs that contain the 5'-GGAG-3' motif in the terminal loop, leading to their terminal uridylation and subsequent degradation (By similarity).

References

Howe K.,et al.Nature 496:498-503(2013).
Lemeer S.,et al.J. Proteome Res. 7:1555-1564(2008).

Images

All lanes : Anti-(DANRE) lin28a Antibody (Center) at 1:2000 dilution Lane 1: Zebrafish muscle lysates Lane 2: Zebrafish lysates Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 22 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



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