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(DANRE) lin28a Blocking Peptide (Center)

Synthetic peptide
Catalog # BP21562c

Specification

(DANRE) lin28a Blocking Peptide (Center) - Product Information

Primary Accession Q803L0

(DANRE) lin28a Blocking Peptide (Center) - Additional Information

Gene ID 394066

Other Names
Protein lin-28 homolog A, Lin-28A, lin28a, lin28

Target/Specificity
The synthetic peptide sequence is selected from aa 85-99 of HUMAN lin28a

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

(DANRE) lin28a Blocking Peptide (Center) - 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}

(DANRE) lin28a Blocking Peptide (Center) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

(DANRE) lin28a Blocking Peptide (Center) - Images

(DANRE) lin28a Blocking Peptide (Center) - 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).

(DANRE) lin28a Blocking Peptide (Center) - References

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