

**LIN28B Antibody [Knockout Validated]**  
**Purified Mouse Monoclonal Antibody (Mab)**  
**Catalog # AW5710**

**Specification**

**LIN28B Antibody [Knockout Validated] - Product Information**

Application	WB,E
Primary Accession	<a href="#">Q6ZN17</a>
Reactivity	Human
Host	Mouse
Clonality	monoclonal
Isotype	IgG1,k
Antigen Source	HUMAN

**LIN28B Antibody [Knockout Validated] - Additional Information**

**Gene ID** 389421

**Other Names**

Protein lin-28 homolog B, Lin-28B, LIN28B, CSDD2

**Dilution**

WB~~1:500-1:2000

**Target/Specificity**

This LIN28B antibody is generated from a mouse immunized with a recombinant protein of human LIN28B.

**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**

LIN28B Antibody [Knockout Validated] is for research use only and not for use in diagnostic or therapeutic procedures.

**LIN28B Antibody [Knockout Validated] - Protein Information**

**Name** LIN28B

**Synonyms** CSDD2

**Function**

Suppressor of microRNA (miRNA) biogenesis, including that of let-7 and possibly of miR107, miR-143 and miR-200c. Binds primary let-7 transcripts (pri-let-7), including pri-let-7g and pri-let-7a-1, and sequester them in the nucleolus, away from the microprocessor complex, hence preventing their processing into mature miRNA (PubMed:[22118463](http://www.uniprot.org/citations/22118463)). Does not act

on pri-miR21 (PubMed:<a href="http://www.uniprot.org/citations/22118463" target="\_blank">22118463</a>). The repression of let-7 expression is required for normal development and contributes to maintain the pluripotent state of embryonic stem cells by preventing let-7-mediated differentiation. When overexpressed, recruits ZCCHC11/TUT4 uridylyltransferase to pre-let-7 transcripts, leading to their terminal uridylation and degradation (PubMed:<a href="http://www.uniprot.org/citations/19703396" target="\_blank">19703396</a>). This activity might not be relevant in vivo, as LIN28B-mediated inhibition of let-7 miRNA maturation appears to be ZCCHC11-independent (PubMed:<a href="http://www.uniprot.org/citations/22118463" target="\_blank">22118463</a>). Interaction with target pre-miRNAs occurs via an 5'- GGAG-3' motif in the pre-miRNA terminal loop. Mediates MYC-induced let- 7 repression (By similarity). When overexpressed, isoform 1 stimulates growth of the breast adenocarcinoma cell line MCF-7. Isoform 2 has no effect on cell growth.

#### **Cellular Location**

Nucleus. Nucleus, nucleolus. Cytoplasm Note=Predominantly nucleolar (PubMed:22118463). In Huh7 cells, predominantly cytoplasmic, with only a subset of cells exhibiting strong nuclear staining; however, the specificity of the polyclonal antibody used in these experiments has not been not documented (PubMed:16971064).

#### **Tissue Location**

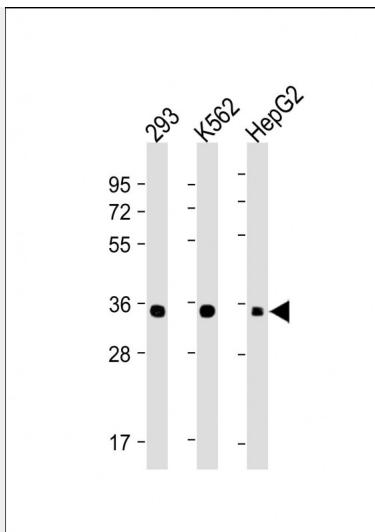
Expressed at high levels in the placenta and, at mucher lower, in testis and fetal liver (PubMed:16971064). Isoform 1 is only detected in placenta and in moderately and poorly differentiated hepatocellular carcinoma cells (at protein level). Isoform 2 is detected in fetal liver, non-tumor liver tissues, as well as well- differentiated tumor tissues (at protein level). Tends to be up- regulated in triple-negative (ER-,PR-,HER2-) breast tumors, as well as in liver, ovarian, and thyroid carcinomas (PubMed:22118463)

#### **LIN28B Antibody [Knockout Validated] - Protocols**

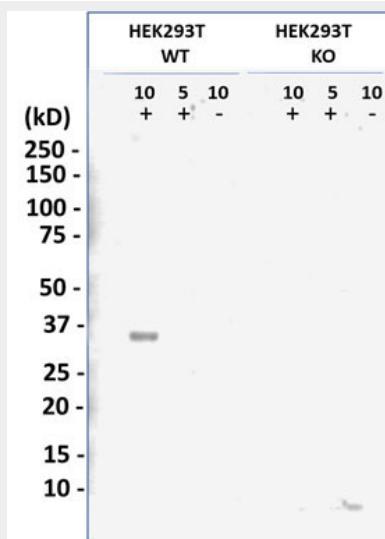
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

#### **LIN28B Antibody [Knockout Validated] - Images**



All lanes : Anti-LIN28B Antibody at 1:4000 dilution Lane 1: 293 whole cell lysate Lane 2: K562 whole cell lysate Lane 3: HepG2 whole cell lysate Lysates/proteins at 20  $\mu$ g per lane. Secondary Goat Anti-mouse IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 27 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



A single 34.3 kDa band for the HEK293T wild type lysate was observed (3  $\mu$ g/ml anti- LIN28B) that closely matches the predicted size of 27.1 kDa. The molecular weight discrepancy could be due to a post-translationally modified form of the target protein, a splice-variant form of the target protein, or an unrelated protein which shares the antibody-reactive epitope. A single 60.7 kDa band was observed in the knock out lysate (20  $\mu$ g lane only).

#### **LIN28B Antibody [Knockout Validated] - Background**

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 ZCCHC11/TUT4 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. Mediates MYC-mediated let-7 repression. Isoform 1, when overexpressed, stimulates growth of the breast adenocarcinoma cell line MCF-7. Isoform 2 has no effect on cell growth.

### **LIN28B Antibody [Knockout Validated] - References**

Moss E.G.,et al.Submitted (JUL-2005) to the EMBL/GenBank/DDBJ databases.  
Ota T.,et al.Nat. Genet. 36:40-45(2004).  
Mungall A.J.,et al.Nature 425:805-811(2003).  
Mural R.J.,et al.Submitted (SEP-2005) to the EMBL/GenBank/DDBJ databases.  
Guo Y.,et al.Gene 384:51-61(2006).