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LIN28B Antibody (Center)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP1485C

Product Information

Application	IHC-P-Leica, FC, IF, WB, E
Primary Accession	Q6ZN17
Other Accession	Q45KJ6
Reactivity	Human, Rat, Mouse
Predicted	Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	27084
Antigen Region	95-128

Additional Information

Gene ID	389421
Other Names	Protein lin-28 homolog B, Lin-28B, LIN28B, CSDD2
Target/Specificity	This LIN28B antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 95-128 amino acids of human LIN28B.
Dilution	IHC-P-Leica~~1:500 FC~~1:10~50 IF~~1:10~50 WB~~1:1000 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	LIN28B Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

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). Does not act on pri-miR21 (PubMed:22118463). 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:19703396). This activity might not be relevant in vivo, as LIN28B-mediated inhibition of let-7 miRNA maturation appears to be ZCCHC11-independent (PubMed:22118463). 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)

Background

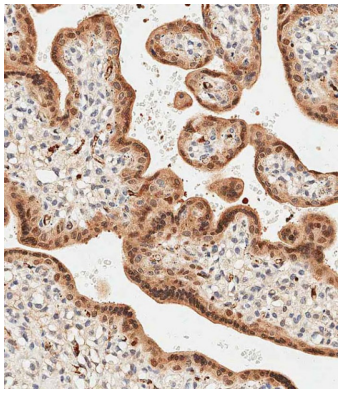
Lin-28 homolog B (LIN28B) is overexpressed in hepatocellular carcinoma. The heterochronic gene lin-28 is a key regulator of developmental timing in the nematode Caenorhabditis elegans. Similar with lin-28 proteins, LIN28B conserves a cold shock domain and a pair of CCHC zinc finger domains. Phylogenetic analysis suggests that they might arise as a result of duplication from an ancestral gene. Overexpression of LIN28B was noted in most HCC cell lines and clinical samples. A short LIN28B isoform was also identified in non-tumor liver tissue and fetal liver. Although predominantly localized in the cytoplasm, LIN28B protein shows cell cycle-dependent nuclear translocation in Huh7 cells. Induced expression of exogenous LIN28B in a tet-off cell line promoted cancer cell proliferation.

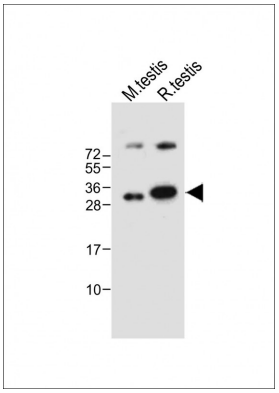
References

Guo,Y., Gene 384, 51-61 (2006)

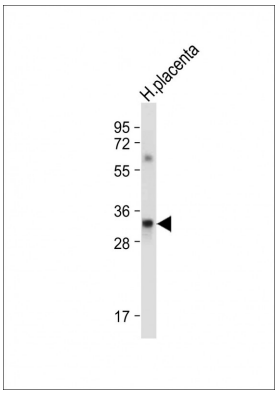
Images

Immunohistochemical analysis of paraffin-embedded human placenta tissue using AP1485C performed on the Leica® BOND RXm. Tissue was fixed with formaldehyde at room temperature, antigen retrieval was by heat mediation with a EDTA buffer (pH9. 0). Samples were incubated with primary antibody(1:500) for 1 hours at room temperature. A undiluted biotinylated CRF Anti-Polyvalent HRP Polymer antibody was used as the secondary antibody.

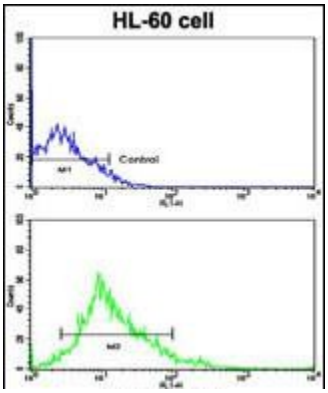




All lanes : Anti-LIN28B Antibody (Center) at 1:2000 dilution Lane 1: Mouse testis tissue lysate Lane 2: Rat testis tissue lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 27 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

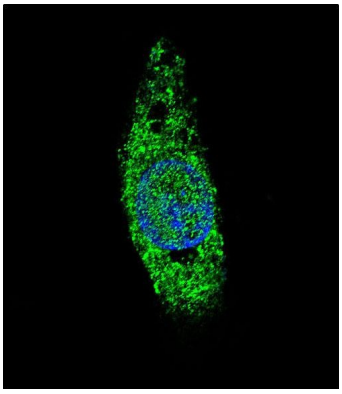


Anti-LIN28B Antibody (Center) at 1:2000 dilution + Human placenta tissue lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 27 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



Flow cytometric analysis of HL-60 cells using LIN28B Antibody (Center)(bottom histogram) compared to a negative control cell (top histogram). FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

Confocal immunofluorescent analysis of LIN28B Antibody (Center) (Cat#AP1485c) with HepG2 cell followed by Alexa Fluor 488-conjugated goat anti-rabbit lgG (green). DAPI was used to stain the cell nuclear (blue).



Citations

- An ontogenetic switch drives the positive and negative selection of B cells
- IMP-1 displays cross-talk with K-Ras and modulates colon cancer cell survival through the novel proapoptotic protein CYFIP2.
- The Lin28b/Wnt5a axis drives pancreas cancer through crosstalk between cancer associated fibroblasts and tumor epithelium