

LARP7 Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab) Catalog # AP12990b

Specification

LARP7 Antibody (C-term) - Product Information

Application Primary Accession Other Accession

Reactivity Predicted Host Clonality Isotype Calculated MW Antigen Region WB,E <u>Q4G0J3</u> <u>Q5XI01, Q05CL8, Q4R627, NP_056269.1,</u> <u>NP_057732.2</u> Human Monkey, Mouse, Rat Rabbit Polyclonal Rabbit IgG 66899 527-556

LARP7 Antibody (C-term) - Additional Information

Gene ID 51574

Other Names

La-related protein 7, La ribonucleoprotein domain family member 7, P-TEFb-interaction protein for 7SK stability, PIP7S, LARP7

Target/Specificity

This LARP7 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 527-556 amino acids from the C-terminal region of human LARP7.

Dilution

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

LARP7 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

LARP7 Antibody (C-term) - Protein Information



Name LARP7 {ECO:0000303|PubMed:18483487, ECO:0000312|HGNC:HGNC:24912}

Function RNA-binding protein that specifically binds distinct small nuclear RNA (snRNAs) and regulates their processing and function (PubMed:18249148, PubMed:32017898). Specifically binds the 7SK snRNA (7SK RNA) and acts as a core component of the 7SK ribonucleoprotein (RNP) complex, thereby acting as a negative regulator of transcription elongation by RNA polymerase II (PubMed:<u>18249148</u>, PubMed:<u>18483487</u>). The 7SK RNP complex sequesters the positive transcription elongation factor b (P-TEFb) in a large inactive 7SK RNP complex preventing RNA polymerase II phosphorylation and subsequent transcriptional elongation (PubMed: 18249148, PubMed:<u>18483487</u>). The 7SK RNP complex also promotes snRNA gene transcription by RNA polymerase II via interaction with the little elongation complex (LEC) (PubMed: 28254838). LARP7 specifically binds to the highly conserved 3'-terminal U-rich stretch of 7SK RNA; on stimulation, remains associated with 7SK RNA, whereas P-TEFb is released from the complex (PubMed:<u>18281698</u>, PubMed:<u>18483487</u>). LARP7 also acts as a regulator of mRNA splicing fidelity by promoting U6 snRNA processing (PubMed: 32017898). Specifically binds U6 snRNAs and associates with a subset of box C/D RNP complexes: promotes U6 snRNA 2'-O-methylation by facilitating U6 snRNA loading into box C/D RNP complexes (PubMed: 32017898). U6 snRNA 2'-O-methylation is required for mRNA splicing fidelity (PubMed: <u>32017898</u>). Binds U6 snRNAs with a 5'- CAGGG-3' sequence motif (PubMed: 32017898). U6 snRNA processing is required for spermatogenesis (By similarity).

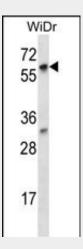
Cellular Location Nucleus, nucleoplasm

LARP7 Antibody (C-term) - Protocols

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

- <u>Western Blot</u>
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- <u>Cell Culture</u>

```
LARP7 Antibody (C-term) - Images
```



LARP7 Antibody (C-term) (Cat. #AP12990b) western blot analysis in WiDr cell line lysates



(35ug/lane). This demonstrates the LARP7 antibody detected the LARP7 protein (arrow).

LARP7 Antibody (C-term) - Background

LARP7 is a negative transcriptional regulator of polymerase II genes, acting by means of the 7SK RNP system. Within the 7SK RNP complex, the positive transcription elongation factor b (P-TEFb) is sequestered in an inactive form, preventing RNA polymerase II phosphorylation and subsequent transcriptional elongation.

LARP7 Antibody (C-term) - References

Tyagi, M., et al. J. Virol. 84(13):6425-6437(2010) Kalsi, G., et al. Hum. Mol. Genet. 19(12):2497-2506(2010) Markert, A., et al. EMBO Rep. 9(6):569-575(2008) Krueger, B.J., et al. Nucleic Acids Res. 36(7):2219-2229(2008) He, N., et al. Mol. Cell 29(5):588-599(2008)