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LARP7 Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP12990b

Product Information

Application	WB, E
Primary Accession	Q4G0J3
Other Accession	Q5XI01, Q05CL8, Q4R627, NP_056269.1, NP_057732.2
Reactivity	Human
Predicted	Monkey, Mouse, Rat, Bovine, Canine, Rabbit, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB32547
Calculated MW	66899
Antigen Region	527-556

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.

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:18249148, PubMed:18483487). 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:18483487). 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:18281698, PubMed:18483487). 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:32017898). 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

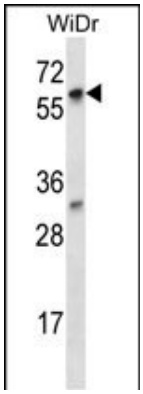
Background

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.

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)

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).

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