10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

LARP7 Rabbit pAb

Catalog # AP98400

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	Q4G0J3
Other Accession	Q4G0J3
Reactivity	Mouse
Predicted	Rat, Human, Rabbit, Chicken, Dog, Horse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	66899
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human LARP7
Epitope Specificity	501-582/582
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Contains 1 HTH La-type RNA-binding domain. Contains 1 RRM (RNA recognition motif) domain.
Post-translational modifications	Phosphorylated upon DNA damage, probably by ATM or ATR.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	This gene encodes a protein which is found in the 7SK snRNP (small nuclear ribonucleoprotein). This snRNP complex inhibits a cyclin-dependent kinase, positive transcription elongation factor b, which is required for paused RNA polymerase II at a promoter to begin transcription elongation. A pseudogene of this gene is located on chromosome 3. Alternative splicing results in multiple transcript variants. [provided by RefSeq, May 2012]

Additional Information

Gene ID	51574
Other Names	ALAZS; HDCMA18P; PIP7S; hLARP7; C330027G06Rik; D3Wsu161e; LARP7_HUMAN; LARP7; La ribonucleoprotein domain family member 7 (hLARP7); P-TEFb-interaction protein for 7SK stability (PIP7S); LARP7_MOUSE; La ribonucleoprotein domain family member 7; LARP7_RAT; La ribonucleoprotein 7, transcriptional regulator; La ribonucleoprotein domain family, member 7; P-TEFb-interaction protein for 7SK stability
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

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

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