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LARP1 Rabbit pAb

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Catalog # AP56558

Product Information

Application	WB, IHC-P, IHC-F, IF
Primary Accession	Q6PKG0
Reactivity	Mouse
Predicted	Rat, Pig, Dog, Human, Rabbit, Zebrafish, Chicken, Horse, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	123510
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human LARP1
Epitope Specificity	601-700/1096
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Cytoplasm
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	LARP1 is a 1,096 amino acid protein belonging to the LARP family. LARP1 contains two conserved regions, one that shares homology with La/SSB proteins and one that is conserved only across LARP family proteins. Within the La/SSB conserved region, LARP1 contains a HTH La-type RNA-binding domain, which may indicate a role in RNA stabalization and folding. Upon DNA damage, LARP1 is phosphorylated by ATR or ATM. LARP1 interacts with many signaling intermediate proteins, including 14-3-3. Widely expressed, LARP1 levels are highest in heart. LARP1 exists as three isoforms produced by alternative splicing.

Additional Information

Gene ID	23367
Other Names	La-related protein 1, La ribonucleoprotein domain family member 1, LARP1, KIAA0731, LARP
Dilution	WB=1:500-2000,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	LARP1
Synonyms	KIAA0731, LARP
Function	RNA-binding protein that regulates the translation of specific target mRNA species downstream of the mTORC1 complex, in function of growth signals and nutrient availability (PubMed:20430826, PubMed:23711370, PubMed:24532714, PubMed:25940091, PubMed:28650797, PubMed:28673543, PubMed:29244122). Interacts on the one hand with the 3' poly-A tails that are present in all mRNA molecules, and on the other hand with the 7-methylguanosine cap structure of mRNAs containing a 5' terminal oligopyrimidine (5'TOP) motif, which is present in mRNAs encoding ribosomal proteins and several components of the translation machinery (PubMed:23711370, PubMed:25940091, PubMed:26206669, PubMed:28379136, PubMed:28650797, PubMed:29244122). The interaction with the 5' end of mRNAs containing a 5'TOP motif leads to translational repression by preventing the binding of EIF4G1 (PubMed:25940091, PubMed:28379136, PubMed:28650797, PubMed:29244122). When mTORC1 is activated, LARP1 is phosphorylated and dissociates from the 5' untranslated region (UTR) of mRNA (PubMed:25940091, PubMed:28650797). Does not prevent binding of EIF4G1 to mRNAs that lack a 5'TOP motif (PubMed:28379136). Interacts with the free 40S ribosome subunit and with ribosomes, both monosomes and polysomes (PubMed:20430826, PubMed:24532714, PubMed:25940091, PubMed:28673543). Under normal nutrient availability, interacts primarily with the 3' untranslated region (UTR) of mRNAs encoding ribosomal proteins and increases protein synthesis (PubMed:23711370, PubMed:28650797). Associates with actively translating ribosomes and stimulates translation of mRNAs containing a 5'TOP motif, thereby regulating protein synthesis, and as a consequence, cell growth and proliferation (PubMed:20430826, PubMed:24532714). Stabilizes mRNAs species with a 5'TOP motif, which is required to prevent apoptosis (PubMed:20430826, PubMed:23711370, PubMed:25940091, PubMed:28673543).
Cellular Location	Cytoplasm. Cytoplasmic granule Note=Colocalizes with RPTOR and PABPC1 in cytoplasmic granules that resemble stress granules.

Background

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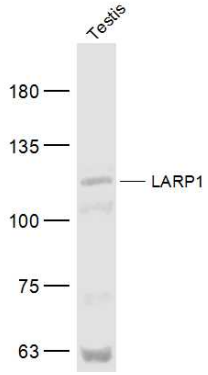
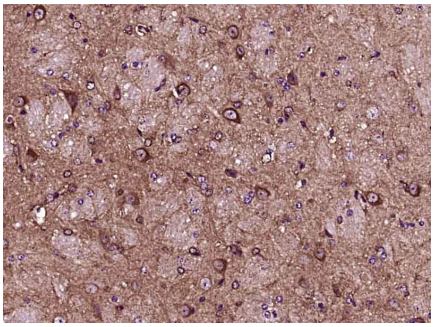
Images



Sample:
Testis (Mouse) Lysate at 40 ug
Primary: Anti-LARP1 (AP56558) at 1/500 dilution
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution
Predicted band size: 124 kD
Observed band size: 124 kD



Paraformaldehyde-fixed, paraffin embedded (Mouse brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (LARP1) Polyclonal Antibody, Unconjugated (AP56558) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.