

LARP1 Polyclonal Antibody

Catalog NumberPA5-35912

Product data sheet

Details		Species Reactivity	
Size	100 µL	Species reactivity	Human
Host/Isotope	Rabbit / IgG	Tested Applications	
Class	Polyclonal	Western Blot (WB)	1:500-1:3,000
Type	Antibody	Immunocytochemistry (ICC/IF)	1:100-1:1,000
Immunogen	Recombinant fragment corresponding to a region within amino acids 661 and 1019 of LARP1	* Suggested working dilutions are given as a guide only. It is recommended that the user titrate the product for use in their own experiment using appropriate negative and positive controls.	
Conjugate	Unconjugated		
Form	Liquid		
Concentration	1 mg/mL		
Purification	Antigen affinity chromatography		
Storage buffer	PBS, pH 7, with 20% glycerol		
Contains	0.01% thimerosal		
Storage Conditions	Store at 4°C short term. For long term storage, store at -20°C, avoiding freeze/thaw cycles.		

Product specific information

Recommended positive controls: IMR32, SK-N-AS. Predicted reactivity: Mouse (98%), Xenopus laevis (85%). Store product as a concentrated solution. Centrifuge briefly prior to opening the vial.

Background/Target Information

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:28650797, PubMed:29244122, PubMed:26206669, PubMed:28379136). 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:28650797, PubMed:29244122, PubMed:28379136). 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). [UniProt]

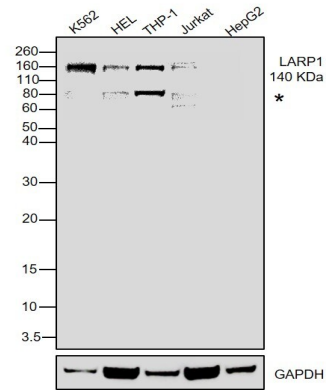
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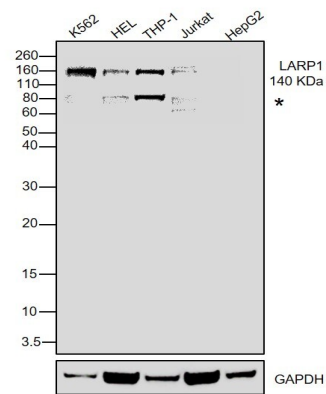
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Product Images For LARP1 Polyclonal Antibody



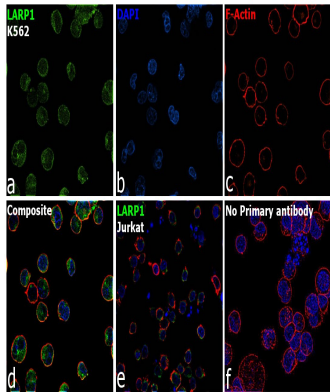
LARP1 Antibody (PA5-35912) in WB

Western blot was performed using Anti-LARP1 Polyclonal Antibody (Product # PA5-35912) and a 140 kDa band corresponding to La-related protein 1 was observed across the cell lines tested with an uncharacterized non specific band (*). Whole cell extracts (30 µg lysate) of K-562 (Lane 1), HEL 92.1.7 (Lane 2), THP-1 (Lane 3), Jurkat (Lane 4), HepG2 (Lane 5) were electrophoresed using NuPAGE™ 4-12% Bis-Tris Protein Gel (Product # NP0322BOX). Resolved proteins were then transferred onto a nitrocellulose membrane (Product # IB23002) by iBlot® 2 Dry Blotting System (Product # IB21001). The blot was probed with the primary antibody (1:1000) and detected by chemiluminescence with Goat anti-Rabbit IgG (Heavy Chain) Superclonal™ Recombinant Secondary Antibody, HRP (Product # A27036, 1:4000) using the iBright™ FL1500 Imaging System (Product # A44115). Chemiluminescent detection was performed using SuperSignal™ West Pico PLUS Chemiluminescent Substrate (Product # 34580).



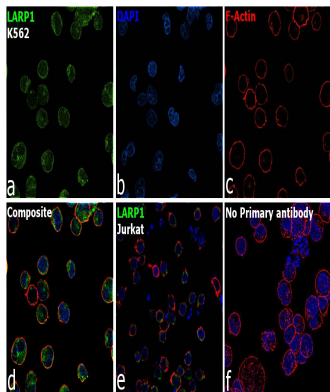
LARP1 Antibody (PA5-35912)

Relative expression of Protein demonstrates antibody specificity. Western blot using LARP1 Polyclonal Antibody (Product # PA5-35912), shows higher expression levels in K562, HEL, THP-1 compared to Jurkat and HepG2. {RE}



LARP1 Antibody (PA5-35912)

Antibody specificity was demonstrated by detection of differential basal expression of the target across cell models owing to their inherent genetic constitution. Immunofluorescence analysis using Anti-LARP1 Polyclonal Antibody (Product # PA5-35912) shows protein expression in K-562 as compared to Jurkat which is low expressing cell model for LARP1. {RE}



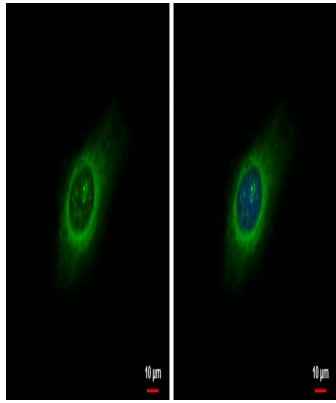
LARP1 Antibody (PA5-35912) in ICC/IF

Immunofluorescence analysis of La-related protein 1 was performed using 70% confluent log phase K-562 cells. The cells were fixed with 4% paraformaldehyde for 15 minutes, permeabilized with 0.1% Triton™ X-100 for 15 minutes, and blocked with 2% BSA for 1 hour at room temperature. The cells were labeled with LARP1 Polyclonal Antibody (Product # PA5-35912) at 5 µg/mL in 0.1% BSA, incubated at 4 degree celsius overnight and then labeled with Donkey anti-Rabbit IgG (H+L) Highly Cross-Adsorbed Secondary Antibody, Alexa Fluor Plus 488 (Product # A32790), (1:2000), for 45 minutes at room temperature (Panel a: Green). Nuclei (Panel b: Blue) were stained with ProLong™ Diamond Antifade Mountant with DAPI (Product # P36962). F-actin (Panel c: Red) was stained with Rhodamine Phalloidin (Product # R415, 1:300). Panel d represents the merged image showing Cytoplasm localization. Panel e represents Jurkat. Panel f represents control cells with no primary antibody to assess background. The images were captured at 60X magnification.

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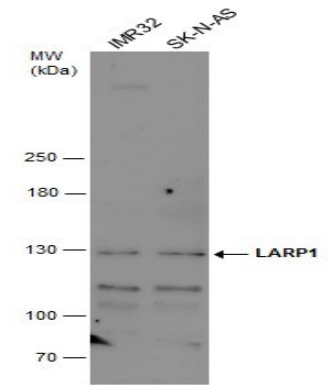
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LARP1 Antibody (PA5-35912) in ICC/IF

LARP1 Polyclonal Antibody detects LARP1 protein at cytoplasm and nucleus by immunofluorescent analysis. Sample: HeLa cells were fixed in ice-cold MeOH for 5 min. Green: LARP1 protein stained by LARP1 Polyclonal Antibody (Product # PA5-35912) diluted at 1:500. Blue: Hoechst 33342 staining.



LARP1 Antibody (PA5-35912) in WB

Western Blot analysis of LARP1 was performed by separating 30 μg of various whole cell extracts by 5% SDS-PAGE. Proteins were transferred to a membrane and probed with a LARP1 Polyclonal Antibody (Product # PA5-35912) at a dilution of 1:500.

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