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PABPC1 Antibody (Center)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP2920c

Product Information

Application	WB, IHC-P, E
Primary Accession	P11940
Other Accession	Q6IP09, P20965, Q9EPH8, P29341, P61286
Reactivity	Human, Mouse
Predicted	Bovine, Rat, Xenopus, Canine, Rabbit, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB20873
Calculated MW	70671
Antigen Region	250-279

Additional Information

Gene ID	26986
Other Names	Polyadenylate-binding protein 1, PABP-1, Poly(A)-binding protein 1, PABPC1, PAB1, PABP1, PABPC2
Target/Specificity	This PABPC1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 250-279 amino acids from the Central region of human PABPC1.
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
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	PABPC1 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	PABPC1 (HGNC:8554)
Function	Binds the poly(A) tail of mRNA, including that of its own transcript, and regulates processes of mRNA metabolism such as pre-mRNA splicing and

	mRNA stability (PubMed:11051545, PubMed:17212783, PubMed:25480299). Its function in translational initiation regulation can either be enhanced by PAIP1 or repressed by PAIP2 (PubMed:11051545, PubMed:20573744). Can probably bind to cytoplasmic RNA sequences other than poly(A) in vivo. Binds to N6-methyladenosine (m6A)-containing mRNAs and contributes to MYC stability by binding to m6A-containing MYC mRNAs (PubMed:32245947). Involved in translationally coupled mRNA turnover (PubMed:11051545). Implicated with other RNA-binding proteins in the cytoplasmic deadenylation/translational and decay interplay of the FOS mRNA mediated by the major coding-region determinant of instability (mCRD) domain (PubMed:11051545). Involved in regulation of nonsense-mediated decay (NMD) of mRNAs containing premature stop codons; for the recognition of premature termination codons (PTC) and initiation of NMD a competitive interaction between UPF1 and PABPC1 with the ribosome-bound release factors is proposed (PubMed:18447585). By binding to long poly(A) tails, may protect them from uridylation by ZCCHC6/ZCCHC11 and hence contribute to mRNA stability (PubMed:25480299).
Cellular Location	Cytoplasm. Cytoplasm, Stress granule. Nucleus. Cell projection, lamellipodium. Note=Localized in cytoplasmic mRNP granules containing untranslated mRNAs (PubMed:17289661). Shuttles between the cytoplasm and the nucleus (PubMed:9582337). During stress and in the absence of DDX3X, localizes to the nucleus (PubMed:21883093). At the leading edge of migrating fibroblasts, colocalizes with DDX3X (PubMed:28733330). Relocalizes to cytoplasmic stress granules upon cellular stress where it colocalizes with ENDOV (PubMed:27573237). In case of HRSV infection, localizes in cytoplasmic inclusion bodies substructures called inclusion bodies associated granules (IBAGs) (PubMed:31649314)
Tissue Location	Ubiquitous.

Background

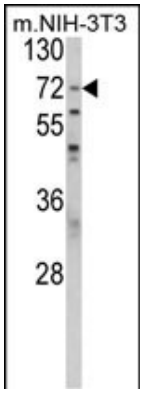
PABPC1 binds the poly(A) tail of mRNA. It may be involved in cytoplasmic regulatory processes of mRNA metabolism such as pre-mRNA splicing. Its function in translational initiation regulation can either be enhanced by PAIP1 or repressed by PAIP2. PABPC1 can probably bind to cytoplasmic RNA sequences other than poly(A) in vivo. It may be involved in translationally coupled mRNA turnover. Implicated with other RNA-binding proteins in the cytoplasmic deadenylation/translational and decay interplay of the FOS mRNA mediated by the major coding-region determinant of instability (mCRD) domain.

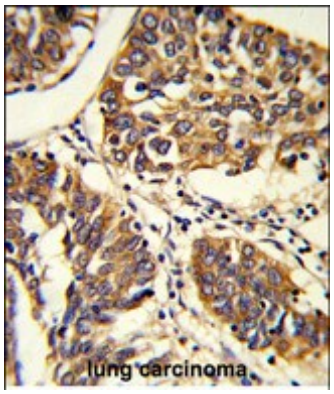
References

Le Clerc,S., et.al., J. Infect. Dis. 200 (8), 1194-1201 (2009)

Images

Western blot analysis of PABPC1 Antibody (Center) (Cat. #AP2920c) in NIH-3T3 cell line lysates (35ug/lane). PABPC1 (arrow) was detected using the purified Pab.





Formalin-fixed and paraffin-embedded human lung carcinoma reacted with PABPC1 Antibody (Center), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

Citations

- Exosomal circPABPC1 promotes colorectal cancer liver metastases by regulating HMGA2 in the nucleus and BMP4/ADAM19 in the cytoplasm

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