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PABPC1 Antibody (Center) Blocking Peptide

Synthetic peptide
Catalog # BP2920c

Specification

PABPC1 Antibody (Center) Blocking Peptide - Product Information

Primary Accession P11940

PABPC1 Antibody (Center) Blocking Peptide - Additional Information

Gene ID 26986

Other Names
Polyadenylate-binding protein 1, PABP-1, Poly(A)-binding protein 1, PABPC1, PAB1, PABP1, PABPC2

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP2920c was selected from the Center region of human PABPC1. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

PABPC1 Antibody (Center) Blocking Peptide - 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:<a

href="http://www.uniprot.org/citations/11051545" target="_blank">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.

PABPC1 Antibody (Center) Blocking Peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

PABPC1 Antibody (Center) Blocking Peptide - Images

PABPC1 Antibody (Center) Blocking Peptide - 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.

PABPC1 Antibody (Center) Blocking Peptide - References

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