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PABPN1 Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP16835b

Product Information

Application	WB, E
Primary Accession	Q86U42
Other Accession	Q28165, NP_004634.1
Reactivity	Human
Predicted	Bovine
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB36573
Calculated MW	32749
Antigen Region	270-298

Additional Information

Gene ID	8106
Other Names	Polyadenylate-binding protein 2, PABP-2, Poly(A)-binding protein 2, Nuclear poly(A)-binding protein 1, Poly(A)-binding protein II, PABII, Polyadenylate-binding nuclear protein 1, PABPN1, PAB2, PABP2
Target/Specificity	This PABPN1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 270-298 amino acids from the C-terminal region of human PABPN1.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.05% (V/V) Proclin 300. 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	PABPN1 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	PABPN1 (HGNC:8565)
Synonyms	PAB2, PABP2

Function	Involved in the 3'-end formation of mRNA precursors (pre- mRNA) by the addition of a poly(A) tail of 200-250 nt to the upstream cleavage product (By similarity). Stimulates poly(A) polymerase (PAPOLA) conferring processivity on the poly(A) tail elongation reaction and also controls the poly(A) tail length (By similarity). Increases the affinity of poly(A) polymerase for RNA (By similarity). Is also present at various stages of mRNA metabolism including nucleocytoplasmic trafficking and nonsense-mediated decay (NMD) of mRNA. Cooperates with SKIP to synergistically activate E-box-mediated transcription through MYOD1 and may regulate the expression of muscle- specific genes (PubMed:11371506). Binds to poly(A) and to poly(G) with high affinity (By similarity). May protect the poly(A) tail from degradation (By similarity). Subunit of the trimeric poly(A) tail exosome targeting (PAXT) complex, a complex that directs a subset of long and polyadenylated poly(A) RNAs for exosomal degradation. The RNA exosome is fundamental for the degradation of RNA in eukaryotic nuclei. Substrate targeting is facilitated by its cofactor MTREX, which links to RNA-binding protein adapters (PubMed:27871484).
Cellular Location	Nucleus. Cytoplasm. Nucleus speckle Note=Localized in cytoplasmic mRNP granules containing untranslated mRNAs. Shuttles between the nucleus and the cytoplasm but predominantly found in the nucleus (PubMed:10688363). Its nuclear import may involve the nucleocytoplasmic transport receptor transportin and a RAN-GTP- sensitive import mechanism (By similarity). Is exported to the cytoplasm by a carrier-mediated pathway that is independent of mRNA traffic. Colocalizes with SKIP and poly(A) RNA in nuclear speckles (By similarity). Intranuclear filamentous inclusions or 'aggregates' are detected in the myocytes of patients; these inclusions contain PABPN1, ubiquitin, subunits of the proteasome and poly(A) RNA {ECO:0000250|UniProtKB:Q28165, ECO:0000269|PubMed:10688363, ECO:0000269|PubMed:11001936, ECO:0000269|PubMed:11371506, ECO:0000269|PubMed:14663186, ECO:0000269|PubMed:17289661, ECO:0000269|PubMed:27209344}
Tissue Location	Ubiquitous.

Background

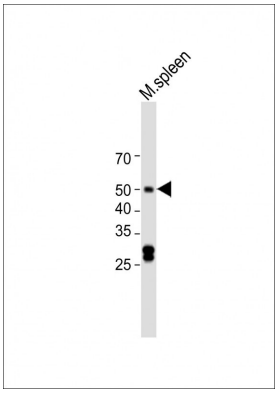
This gene encodes an abundant nuclear protein that binds with high affinity to nascent poly(A) tails. The protein is required for progressive and efficient polymerization of poly(A) tails on the 3' ends of eukaryotic genes and controls the size of the poly(A) tail to about 250 nt. At steady-state, this protein is localized in the nucleus whereas a different poly(A) binding protein is localized in the cytoplasm. An expansion of the trinucleotide (GCG) repeat from normal 6 to 8-13 at the 5' end of the coding region of this gene leads to autosomal dominant oculopharyngeal muscular dystrophy (OPMD) disease. Multiple splice variants have been described but their full-length nature is not known. One splice variant includes introns 1 and 6 but no protein is formed.

References

Hosgood, H.D. III, et al. Occup Environ Med 66(12):848-853(2009)
Hurt, J.A., et al. J. Cell Biol. 185(2):265-277(2009)
Kuo, H.C., et al. J. Neurol. Sci. 278 (1-2), 21-24 (2009) :
Tavanez, J.P., et al. PLoS ONE 4 (7), E6418 (2009) :
Maksimova, N.R., et al. Zh Nevrol Psikhiatr Im S S Korsakova 108(6):52-60(2008)

Images

All lanes: Anti-PABPN1 Antibody (C-term) at 1:1000



dilution + Mouse spleen lysate Lysates/proteins at 20 µg per lane. Secondary: Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ASP1615) at 1/15000 dilution. Observed band size: 50 KDa Blocking/Dilution buffer: 5% NFDM/TBST.