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PAN2 Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP16665b

Product Information

Application	WB, E
Primary Accession	Q504Q3
Other Accession	Q6IE70, Q8BGF7, Q5F450, NP_055686.3, NP_001120932.1
Reactivity	Human
Predicted	Chicken, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB36461
Calculated MW	135368
Antigen Region	860-888

Additional Information

Gene ID	9924
Other Names	PAB-dependent poly(A)-specific ribonuclease subunit PAN2 {ECO:0000255|HAMAP-Rule:MF_03182}, hPan2, 31134 {ECO:0000255|HAMAP-Rule:MF_03182}, Inactive ubiquitin carboxyl-terminal hydrolase 52 {ECO:0000255|HAMAP-Rule:MF_03182}, PAB1P-dependent poly(A)-nuclease {ECO:0000255|HAMAP-Rule:MF_03182}, PAN deadenylation complex catalytic subunit 2 {ECO:0000255|HAMAP-Rule:MF_03182}, PAN2 {ECO:0000255|HAMAP-Rule:MF_03182}, KIAA0710, USP52
Target/Specificity	This PAN2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 860-888 amino acids from the C-terminal region of human PAN2.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
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	PAN2 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	PAN2 {ECO:0000255|HAMAP-Rule:MF_03182}
Synonyms	KIAA0710, USP52
Function	Catalytic subunit of the poly(A)-nuclease (PAN) deadenylation complex, one of two cytoplasmic mRNA deadenylases involved in general and miRNA-mediated mRNA turnover. PAN specifically shortens poly(A) tails of RNA and the activity is stimulated by poly(A)-binding protein (PABP). PAN deadenylation is followed by rapid degradation of the shortened mRNA tails by the CCR4-NOT complex. Deadenylated mRNAs are then degraded by two alternative mechanisms, namely exosome-mediated 3'-5' exonucleolytic degradation, or deadenylation-dependent mRNA decaping and subsequent 5'-3' exonucleolytic degradation by XRN1. Also acts as an important regulator of the HIF1A-mediated hypoxic response. Required for HIF1A mRNA stability independent of poly(A) tail length regulation.
Cellular Location	Cytoplasm. Cytoplasm, P-body {ECO:0000255|HAMAP- Rule:MF_03182, ECO:0000269|PubMed:18625844, ECO:0000269|PubMed:23398456}. Nucleus {ECO:0000255|HAMAP-Rule:MF_03182, ECO:0000269|PubMed:16284618}. Note=Shuttles between nucleus and cytoplasm. {ECO:0000255|HAMAP-Rule:MF_03182, ECO:0000269|PubMed:16284618}

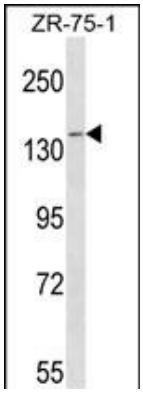
Background

This gene encodes a deadenylase that functions as the catalytic subunit of the polyadenylate binding protein dependent poly(A) nuclease complex. The encoded protein is a magnesium dependent 3' to 5' exoribonuclease that is involved in the degradation of cytoplasmic mRNAs. Alternate splicing results in multiple transcript variants.

References

Bailey, S.D., et al. Diabetes Care (2010) In press :
Talmud, P.J., et al. Am. J. Hum. Genet. 85(5):628-642(2009)
Funakoshi, Y., et al. Genes Dev. 21(23):3135-3148(2007)
Ezzeddine, N., et al. Mol. Cell. Biol. 27(22):7791-7801(2007)
Yamashita, A., et al. Nat. Struct. Mol. Biol. 12(12):1054-1063(2005)

Images



PAN2 Antibody (C-term) (Cat. #AP16665b) western blot analysis in ZR-75-1 cell line lysates (35ug/lane).This demonstrates the PAN2 antibody detected the PAN2 protein (arrow).