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DCP2 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP9182c

Product Information

Application	WB, IHC-P, FC, E
Primary Accession	Q8IU60
Other Accession	Q9CYC6
Reactivity	Human
Predicted	Mouse, Rat, Bovine, Canine, Rabbit, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB23240
Calculated MW	48423
Antigen Region	144-173

Additional Information

Gene ID	167227
Other Names	m7GpppN-mRNA hydrolase, Nucleoside diphosphate-linked moiety X motif 20, Nudix motif 20, mRNA-decapping enzyme 2, hDpc, DCP2, NUDT20
Target/Specificity	This DCP2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 144-173 amino acids from the Central region of human DCP2.
Dilution	WB~~1:1000 IHC-P~~1:100~500 FC~~1:10~50 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	DCP2 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	DCP2
Synonyms	NUDT20

Function	Decapping metalloenzyme that catalyzes the cleavage of the cap structure on mRNAs (PubMed:12218187, PubMed:12417715, PubMed:12923261, PubMed:21070968, PubMed:28002401, PubMed:31875550). Removes the 7-methyl guanine cap structure from mRNA molecules, yielding a 5'-phosphorylated mRNA fragment and 7m-GDP (PubMed:12486012, PubMed:12923261, PubMed:21070968, PubMed:28002401, PubMed:31875550). Necessary for the degradation of mRNAs, both in normal mRNA turnover and in nonsense-mediated mRNA decay (PubMed:14527413). Plays a role in replication-dependent histone mRNA degradation (PubMed:18172165). Has higher activity towards mRNAs that lack a poly(A) tail (PubMed:21070968). Has no activity towards a cap structure lacking an RNA moiety (PubMed:21070968). The presence of a N(6)-methyladenosine methylation at the second transcribed position of mRNAs (N(6),2'-O-dimethyladenosine cap; m6A(m)) provides resistance to DCP2-mediated decapping (PubMed:28002401). Blocks autophagy in nutrient-rich conditions by repressing the expression of ATG-related genes through degradation of their transcripts (PubMed:26098573).
Cellular Location	Cytoplasm, P-body. Nucleus Note=Predominantly cytoplasmic, in processing bodies (PB) (PubMed:15273322). A minor amount is nuclear (PubMed:15273322)
Tissue Location	Expressed in brain and testis. Not detected in heart (at protein level).

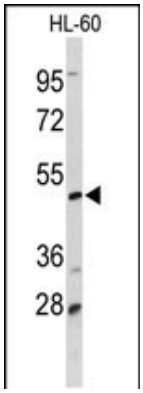
Background

DCP2 is a key component of an mRNA-decapping complex required for removal of the 5-prime cap from mRNA prior to its degradation from the 5-prime end (Fenger-Gron et al., 2005).

References

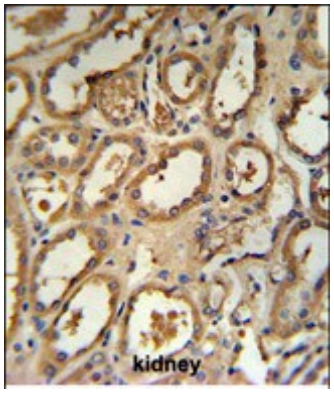
Yamochi,T., et.al., Biochem. Biophys. Res. Commun. 370 (1), 195-199 (2008)
Li,Y., et.al., Mol. Cell. Biol. 28 (3), 939-948 (2008)

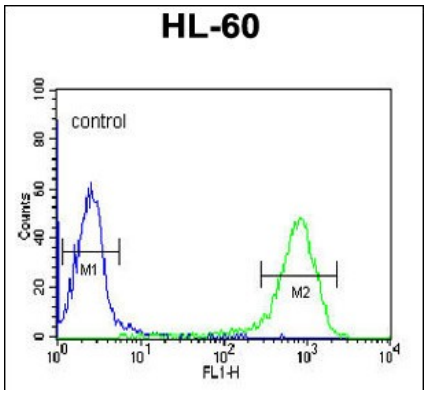
Images



Western blot analysis of DCP2 Antibody (Center) (Cat. #AP9182c) in HL-60 cell line lysates (35ug/lane). DCP2 (arrow) was detected using the purified Pab.

DCP2 Antibody (Center) (Cat. #AP9182c) IHC analysis in formalin fixed and paraffin embedded human kidney tissue followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of the DCP2 Antibody (Center) for immunohistochemistry. Clinical relevance has not been evaluated.





DCP2 Antibody (Center) (Cat. #AP9182c) flow cytometric analysis of HL-60 cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

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