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NUDT12 Antibody (Center) Blocking Peptide
Synthetic peptide
Catalog # BP9231c

Specification

NUDT12 Antibody (Center) Blocking Peptide - Product Information

Primary Accession Q9BQG2

NUDT12 Antibody (Center) Blocking Peptide - Additional Information

Gene ID 83594

Other Names
Peroxisomal NADH pyrophosphatase NUDT12, Nucleoside diphosphate-linked moiety X motif 12, Nudix motif 12, NUDT12

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP9231c was selected from the Center region of human NUDT12. 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.

NUDT12 Antibody (Center) Blocking Peptide - Protein Information

Name NUDT12 {ECO:0000303|PubMed:12790796, ECO:0000312|HGNC:HGNC:18826}

Function
mRNA decapping enzyme that specifically removes the nicotinamide adenine dinucleotide (NAD) cap from a subset of mRNAs by hydrolyzing the diphosphate linkage to produce nicotinamide mononucleotide (NMN) and 5' monophosphate mRNA (PubMed:31101919, PubMed:31875550). The NAD-cap is present at the 5'-end of some RNAs; in contrast to the canonical N7 methylguanosine (m7G) cap, the NAD cap promotes mRNA decay (PubMed:31101919). Preferentially acts on NAD- capped transcripts in response to nutrient stress (PubMed:31101919). Also acts on free nicotinamide adenine dinucleotide molecules: hydrolyzes NAD(H) into NMN(H) and AMP, and

NADPH into NMNH and 2',5'- ADP (PubMed:12790796). May act to regulate the concentration of peroxisomal nicotinamide nucleotide cofactors required for oxidative metabolism in this organelle (PubMed:12790796). Regulates the levels of circadian clock components PER1, PER2, PER3 and CRY2 in the liver (By similarity).

Cellular Location
Cytoplasm. Peroxisome. Cytoplasmic granule. Note=Localizes to cytoplasmic granules in the presence of BLMH.

NUDT12 Antibody (Center) Blocking Peptide - Protocols

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

- Blocking Peptides

NUDT12 Antibody (Center) Blocking Peptide - Images

NUDT12 Antibody (Center) Blocking Peptide - Background

Nucleotides are involved in numerous biochemical reactions and pathways within the cell as substrates, cofactors, and effectors. Nudix hydrolases, such as NUDT12 (Nudix (nucleoside diphosphate linked moiety X)-type motif 12), regulate the concentrations of individual nucleotides and of nucleotide ratios in response to changing circumstances. NUDT12 hydrolyzes NAD(P)H to NMNH and AMP (2',5'-ADP), and diadenosine diphosphate to AMP. It also has moderate activity towards NAD(P)(+), ADP-ribose and diadenosine triphosphate. It may regulate the concentration of peroxisomal nicotinamide nucleotide cofactors required for oxidative metabolism.

NUDT12 Antibody (Center) Blocking Peptide - References

Abdelraheim,S.R., et.al, Biochem. J. 374 (PT 2), 329-335 (2003)Simpson,J.C., et.al, EMBO Rep. 1 (3), 287-292 (2000)