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DOM3Z Antibody (N-term Y88) Blocking Peptide

Synthetic peptide
Catalog # BP6635a

Specification

DOM3Z Antibody (N-term Y88) Blocking Peptide - Product Information

Primary Accession O77932

DOM3Z Antibody (N-term Y88) Blocking Peptide - Additional Information

Gene ID 1797

Other Names
Decapping and exoribonuclease protein, DXO, 3113-, 361-, Dom-3 homolog Z, DXO, DOM3L, DOM3Z, NG6

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP6635a was selected from the N-term region of human DOM3Z. 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.

DOM3Z Antibody (N-term Y88) Blocking Peptide - Protein Information

Name DXO {ECO:0000303|PubMed:29601584, ECO:0000312|HGNC:HGNC:2992}

Function
Decapping enzyme for NAD-capped RNAs: specifically hydrolyzes the nicotinamide adenine dinucleotide (NAD) cap from a subset of RNAs by removing the entire NAD moiety from the 5'-end of an NAD-capped RNA (PubMed:28283058). The NAD-cap is present at the 5'-end of some RNAs and snoRNAs (PubMed:28283058). In contrast to the canonical 5'-end N7 methylguanosine (m7G) cap, the NAD cap promotes mRNA decay (PubMed:28283058). Preferentially acts on NAD-capped transcripts in response to environmental stress (PubMed:31101919). Also acts as a non- canonical decapping enzyme that removes the entire cap structure of m7G capped or

incompletely capped RNAs and mediates their subsequent degradation (By similarity). Specifically degrades pre-mRNAs with a defective 5'-end m7G cap and is part of a pre-mRNA capping quality control (By similarity). Has decapping activity toward incomplete 5'- end m7G cap mRNAs such as unmethylated 5'-end-capped RNA (cap0), while it has no activity toward 2'-O-ribose methylated m7G cap (cap1) (PubMed:29601584). In contrast to canonical decapping enzymes DCP2 and NUDT16, which cleave the cap within the triphosphate linkage, the decapping activity releases the entire cap structure GpppN and a 5'-end monophosphate RNA (By similarity). Also has 5'-3' exoribonuclease activities: The 5'-end monophosphate RNA is then degraded by the 5'-3' exoribonuclease activity, enabling this enzyme to decap and degrade incompletely capped mRNAs (PubMed:29601584). Also possesses RNA 5'- pyrophosphohydrolase activity by hydrolyzing the 5'-end triphosphate to release pyrophosphates (By similarity). Exhibits decapping activity towards FAD-capped RNAs (PubMed:32374864). Exhibits decapping activity towards dpCoA-capped RNAs in vitro (By similarity).

Cellular Location
Nucleus

Tissue Location
Ubiquitously expressed.

DOM3Z Antibody (N-term Y88) Blocking Peptide - Protocols

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

- Blocking Peptides

DOM3Z Antibody (N-term Y88) Blocking Peptide - Images

DOM3Z Antibody (N-term Y88) Blocking Peptide - Background

The function of DOM3Z is unknown, but its ubiquitous expression and conservation in both simple and complex eukaryotes suggests that its gene may be a housekeeping gene.

DOM3Z Antibody (N-term Y88) Blocking Peptide - References

Lehner,B., Genome Res. 14 (7), 1315-1323 (2004)