

DCPS Antibody (Center) Blocking Peptide
Synthetic peptide
Catalog # BP17101c**Specification**

DCPS Antibody (Center) Blocking Peptide - Product InformationPrimary Accession [Q96C86](#)**DCPS Antibody (Center) Blocking Peptide - Additional Information****Gene ID** 28960**Other Names**

m7GpppX diphosphatase, DCS-1, Decapping scavenger enzyme, Hint-related 7meGMP-directed hydrolase, Histidine triad nucleotide-binding protein 5, Histidine triad protein member 5, HINT-5, Scavenger mRNA-decapping enzyme DcpS, DCPS, DCS1, HINT5

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.

DCPS Antibody (Center) Blocking Peptide - Protein Information**Name** DCPS**Synonyms** DCS1, HINT5**Function**

Decapping scavenger enzyme that catalyzes the cleavage of a residual cap structure following the degradation of mRNAs by the 3'→5' exosome-mediated mRNA decay pathway. Hydrolyzes cap analog structures like 7-methylguanosine nucleoside triphosphate (m7GpppG) with up to 10 nucleotide substrates (small capped oligoribonucleotides) and specifically releases 5'-phosphorylated RNA fragments and 7- methylguanosine monophosphate (m7GMP). Cleaves cap analog structures like tri-methyl guanosine nucleoside triphosphate (m3(2,2,7)GpppG) with very poor efficiency. Does not hydrolyze unmethylated cap analog (GpppG) and shows no decapping activity on intact m7GpppG-capped mRNA molecules longer than 25 nucleotides. Does not hydrolyze 7- methylguanosine diphosphate (m7GDP) to m7GMP (PubMed:22985415). May also play a role in the 5'→3' mRNA decay pathway; m7GDP, the downstream product released by the 5'→3' mRNA mediated decapping activity, may be also converted by DCPS to m7GMP (PubMed:14523240). Binds to m7GpppG and strongly to m7GDP. Plays a role in first intron splicing of pre-mRNAs. Inhibits

activation-induced cell death.

Cellular Location

Cytoplasm. Nucleus. Note=Predominantly localized in the nucleus. Nucleocytoplasmic shuttling protein that can transiently enter the cytoplasm in mammalian cells in a XPO1/CRM1- dependent manner

Tissue Location

Detected in liver, brain, kidney, testis and prostate.

DCPS Antibody (Center) Blocking Peptide - Protocols

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

- [Blocking Peptides](#)

DCPS Antibody (Center) Blocking Peptide - Images**DCPS Antibody (Center) Blocking Peptide - Background**

Necessary for the complete degradation of mRNAs, both in normal mRNA turnover and in nonsense-mediated mRNA decay. Removes the 7-methyl guanine cap structure from mRNA fragments shorter than 10 nucleotides that are produced by 3'→5' exonuclease-mediated mRNA decay. Releases m7GMP. Can also degrade m7GDP to m7GMP. Has no activity towards mRNA molecules longer than 25 nucleotides.

DCPS Antibody (Center) Blocking Peptide - References

Sebastiani, P., et al. Science (2010) In press :Mariller, C., et al. Biochimie 91(1):109-122(2009)Liu, S.W., et al. J. Biol. Chem. 283(24):16427-16436(2008)Shen, V., et al. RNA 14(6):1132-1142(2008)Lamesch, P., et al. Genomics 89(3):307-315(2007)