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DHX36 Antibody (Center) Blocking Peptide

Synthetic peptide
Catalog # BP18778c

Specification

DHX36 Antibody (Center) Blocking Peptide - Product Information

Primary Accession Q9H2U1

DHX36 Antibody (Center) Blocking Peptide - Additional Information

Gene ID 170506

Other Names
ATP-dependent RNA helicase DHX36, DEAH box protein 36, G4-resolvase 1, G4R1, MLE-like protein 1, RNA helicase associated with AU-rich element ARE, DHX36, DDX36, KIAA1488, MLEL1, RHAU

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.

DHX36 Antibody (Center) Blocking Peptide - Protein Information

Name DHX36 (HGNC:14410)

Function
Multifunctional ATP-dependent helicase that unwinds G- quadruplex (G4) structures (PubMed:16150737, PubMed:18854321, PubMed:20472641, PubMed:21586581). Plays a role in many biological processes such as genomic integrity, gene expression regulations and as a sensor to initiate antiviral responses (PubMed:14731398, PubMed:18279852, PubMed:21993297, PubMed:22238380, PubMed:25579584). G4 structures correspond to helical structures containing guanine tetrads (By similarity). Binds with high affinity to and unwinds G4 structures that are formed in nucleic acids (G4-DNA and G4-RNA) (PubMed:16150737, PubMed:18842585, PubMed:20472641,

PubMed:21586581, PubMed:24369427, PubMed:26195789). Plays a role in genomic integrity (PubMed:22238380). Converts the G4-RNA structure present in telomerase RNA template component (TREC) into a double-stranded RNA to promote P1 helix formation that acts as a template boundary ensuring accurate reverse transcription (PubMed:20472641, PubMed:21149580, PubMed:21846770, PubMed:22238380, PubMed:24151078, PubMed:25579584). Plays a role in transcriptional regulation (PubMed:21586581, PubMed:21993297). Resolves G4-DNA structures in promoters of genes, such as YY1, KIT/c-kit and ALPL and positively regulates their expression (PubMed:21993297). Plays a role in post-transcriptional regulation (PubMed:27940037). Unwinds a G4-RNA structure located in the 3'-UTR polyadenylation site of the pre- mRNA TP53 and stimulates TP53 pre-mRNA 3'-end processing in response to ultraviolet (UV)-induced DNA damage (PubMed:27940037). Binds to the precursor-microRNA-134 (pre-miR-134) terminal loop and regulates its transport into the synapto-dendritic compartment (By similarity). Involved in the pre-miR-134-dependent inhibition of target gene expression and the control of dendritic spine size (By similarity). Plays a role in the regulation of cytoplasmic mRNA translation and mRNA stability (PubMed:24369427, PubMed:26489465). Binds to both G4-RNA structures and alternative non-quadruplex-forming sequence within the 3'-UTR of the PITX1 mRNA regulating negatively PITX1 protein expression (PubMed:24369427). Binds to both G4-RNA structure in the 5'-UTR and AU- rich elements (AREs) localized in the 3'-UTR of NKX2-5 mRNA to either stimulate protein translation or induce mRNA decay in an ELAVL1- dependent manner, respectively (PubMed:26489465). Binds also to ARE sequences present in several mRNAs mediating exosome-mediated 3'-5' mRNA degradation (PubMed:14731398, PubMed:18279852). Involved in cytoplasmic urokinase-type plasminogen activator (uPA) mRNA decay (PubMed:14731398). Component of a multi-helicase-TICAM1 complex that acts as a cytoplasmic sensor of viral double-stranded RNA (dsRNA) and plays a role in the activation of a cascade of antiviral responses including the induction of pro-inflammatory cytokines via the adapter molecule TICAM1 (By similarity). Required for early embryonic development and hematopoiesis. Involved in the regulation of cardioblast differentiation and proliferation during heart development. Involved in spermatogonia differentiation. May play a role in ossification (By similarity).

Cellular Location

Nucleus. Cytoplasm. Cytoplasm, cytosol {ECO:0000250|UniProtKB:Q8VHK9}. Cytoplasm, Stress granule. Nucleus speckle. Chromosome, telomere. Mitochondrion {ECO:0000250|UniProtKB:Q8VHK9}. Perikaryon {ECO:0000250|UniProtKB:D4A2Z8}. Cell projection, dendrite {ECO:0000250|UniProtKB:D4A2Z8}. Cell projection, axon {ECO:0000250|UniProtKB:D4A2Z8}. Note=Predominantly localized in the nucleus (PubMed:18279852). Colocalizes with SRSF2 in nuclear speckles (PubMed:18279852). Colocalizes with DDX5 in nucleolar caps upon transcription inhibition (PubMed:18279852). Accumulates and colocalized with TIA1 in cytoplasmic stress granules (SGs) in an arsenite-, heat shock- and

RNA-binding-dependent manner (PubMed:18854321). Shuttles into and out of SGs in an ATPase-dependent manner (PubMed:18854321) Colocalizes in the cytosol with the multi-helicase-TICAM1 complex that translocates to the mitochondria upon poly(I:C) RNA ligand stimulation (By similarity). {ECO:0000250|UniProtKB:Q8VHK9, ECO:0000269|PubMed:18279852, ECO:0000269|PubMed:18854321} [Isoform 2]: Nucleus. Cytoplasm Note=Preferentially localized in the cytoplasm (PubMed:14731398) Excluded from nucleoli (PubMed:14731398)

Tissue Location
Highly expressed in testis.

DHX36 Antibody (Center) Blocking Peptide - Protocols

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

- Blocking Peptides

DHX36 Antibody (Center) Blocking Peptide - Images

DHX36 Antibody (Center) Blocking Peptide - Background

This gene is a member of the DEAH-box family ofRNA-dependent NTPases which are named after the conserved aminoacid sequence Asp-Glu-Ala-His in motif II. The protein encoded bythis gene has been shown to enhance the deadenylation and decay ofmRNAs with 3'-UTR AU-rich elements (ARE-mRNA). The protein has alsobeen shown to resolve into single strands the highly stabletetramolecular DNA configuration (G4) that can form spontaneouslyin guanine-rich regions of DNA. Alternative splicing results inmultiple transcript variants encoding different isoforms. [providedby RefSeq].

DHX36 Antibody (Center) Blocking Peptide - References

Lattmann, S., et al. Nucleic Acids Res. 38(18):6219-6233(2010)Kim, T., et al. Proc. Natl. Acad. Sci. U.S.A. 107(34):15181-15186(2010)Chalupnikova, K., et al. J. Biol. Chem. 283(50):35186-35198(2008)Creacy, S.D., et al. J. Biol. Chem. 283(50):34626-34634(2008)Iwamoto, F., et al. Exp. Cell Res. 314(6):1378-1391(2008)