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DDX11 Antibody (Center) Blocking Peptide
Synthetic peptide
Catalog # BP10453c

Specification

DDX11 Antibody (Center) Blocking Peptide - Product Information

Primary Accession	Q96FC9
Other Accession	NP_689651.1, NP_004390.3

DDX11 Antibody (Center) Blocking Peptide - Additional Information

Gene ID 1663

Other Names
Probable ATP-dependent RNA helicase DDX11, CHL1-related protein 1, hCHLR1, DEAD/H box protein 11, Keratinocyte growth factor-regulated gene 2 protein, KRG-2, DDX11, CHL1, CHLR1, KRG2

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.

DDX11 Antibody (Center) Blocking Peptide - Protein Information

Name DDX11 (HGNC:2736)

Function
DNA-dependent ATPase and ATP-dependent DNA helicase that participates in various functions in genomic stability, including DNA replication, DNA repair and heterochromatin organization as well as in ribosomal RNA synthesis (PubMed:10648783, PubMed:21854770, PubMed:23797032, PubMed:26089203, PubMed:26503245). Its double-stranded DNA helicase activity requires either a minimal 5'-single-stranded tail length of approximately 15 nt (flap substrates) or 10 nt length single- stranded gapped DNA substrates of a partial duplex DNA structure for helicase loading and translocation along DNA in a 5' to 3' direction (PubMed:18499658, PubMed:22102414). The helicase activity is capable of displacing duplex regions up to 100 bp, which can be extended up to 500 bp by the replication protein A (RPA) or the cohesion CTF18-replication factor C (Ctf18-RFC) complex

activities (PubMed:18499658). Shows also ATPase- and helicase activities on substrates that mimic key DNA intermediates of replication, repair and homologous recombination reactions, including forked duplex, anti-parallel G-quadruplex and three-stranded D-loop DNA molecules (PubMed:22102414, PubMed:26503245). Plays a role in DNA double-strand break (DSB) repair at the DNA replication fork during DNA replication recovery from DNA damage (PubMed:23797032). Recruited with TIMELESS factor upon DNA-replication stress response at DNA replication fork to preserve replication fork progression, and hence ensure DNA replication fidelity (PubMed:26503245). Cooperates also with TIMELESS factor during DNA replication to regulate proper sister chromatid cohesion and mitotic chromosome segregation (PubMed:17105772, PubMed:18499658, PubMed:20124417, PubMed:23116066, PubMed:23797032). Stimulates 5'- single-stranded DNA flap endonuclease activity of FEN1 in an ATP- and helicase-independent manner; and hence it may contribute in Okazaki fragment processing at DNA replication fork during lagging strand DNA synthesis (PubMed:18499658). Its ability to function at DNA replication fork is modulated by its binding to long non-coding RNA (lncRNA) cohesion regulator non-coding RNA DDX11-AS1/CONCR, which is able to increase both DDX11 ATPase activity and binding to DNA replicating regions (PubMed:27477908). Also plays a role in heterochromatin organization (PubMed:21854770). Involved in rRNA transcription activation through binding to active hypomethylated rDNA gene loci by recruiting UBTF and the RNA polymerase Pol I transcriptional machinery (PubMed:26089203). Plays a role in embryonic development and prevention of aneuploidy (By similarity). Involved in melanoma cell proliferation and survival (PubMed:23116066). Associates with chromatin at DNA replication fork regions (PubMed:27477908). Binds to single- and double-stranded DNAs (PubMed:9013641, PubMed:18499658, PubMed:22102414).

Cellular Location
Nucleus. Nucleus, nucleolus. Cytoplasm, cytoskeleton, spindle pole. Midbody Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Note=During the early stages of mitosis, localizes to condensed chromatin and is released from the chromatin with progression to metaphase. Also localizes to the spindle poles throughout mitosis and at the midbody at later stages of mitosis (metaphase to telophase) (PubMed:17105772). In interphase, colocalizes with nucleolin in the nucleolus (PubMed:26089203)

Tissue Location
Expressed in melanoma cells. Not detected in epidermal melanocytes of normal skin (at protein level) (PubMed:23116066). Highly expressed in spleen, B-cells, thymus, testis, ovary, small intestine and pancreas (PubMed:9013641). Very low expression seen in brain (PubMed:9013641). Expressed in dividing cells and/or cells undergoing high levels of recombination (PubMed:9013641) No expression detected in cells signaled to terminally differentiate (PubMed:9013641). Expressed weakly in keratinocytes (PubMed:8798685)

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DDX11 Antibody (Center) Blocking Peptide - Protocols

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

- Blocking Peptides

DDX11 Antibody (Center) Blocking Peptide - Images

DDX11 Antibody (Center) Blocking Peptide - Background

DEAD box proteins, characterized by the conserved motifAsp-Glu-Ala-Asp (DEAD), are putative RNA helicases. They areimplicated in a number of cellular processes involving alterationof RNA secondary structure such as translation initiation, nuclearand mitochondrial splicing, and ribosome and spliceosome assembly.Based on their distribution patterns, some members of this familyare believed to be involved in embryogenesis, spermatogenesis, andcellular growth and division. DDX11 encodes a DEAD box protein,which is an enzyme that possesses both ATPase and DNA helicaseactivities. DDX11 is a homolog of the yeast CHL1 gene, and mayfunction to maintain chromosome transmission fidelity and genomestability.

DDX11 Antibody (Center) Blocking Peptide - References

Leman, A.R., et al. J. Cell. Sci. 123 (PT 5), 660-670 (2010) :Farina, A., et al. J. Biol. Chem. 283(30):20925-20936(2008)Parish, J.L., et al. Mol. Cell 24(6):867-876(2006)Parish, J.L., et al. J. Cell. Sci. 119 (PT 23), 4857-4865 (2006) :Vasa-Nicotera, M., et al. Am. J. Hum. Genet. 76(1):147-151(2005)