

Datasheet for ABIN3092076

DDX11 Protein (AA 1-970) (Strep Tag)



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Overview

Quantity:	250 µg
Target:	DDX11
Protein Characteristics:	AA 1-970
Origin:	Human
Source:	Cell-free protein synthesis (CFPS)
Protein Type:	Recombinant
Purification tag / Conjugate:	This DDX11 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Brand:	AlIcE®
Sequence:	<p>MANETQKVGA IHFPFPFTPY SIQEDFMAEL YRVLEAGKIG IFESPTGTGK SLSLICGALS</p> <p>WLRDFEQKKR EEEARLLETG TGPLHDEKDE SLCLSSSCEG AAGTPRPAGE PAWVTQFVQK</p> <p>KEERDLVDRL KAEQARRKQR EERLQQLQHR VQLKYAAKRL RQEEEEERENL LRLSREMLET</p> <p>GPEAERLEQL ESGEEELVLA EYESDEEEKV ASRVDEDEDD LEEEHITKIY YCSRTHSCLA</p> <p>QFVHEVKKSP FGKDVRLVSL GSRQNLCVNE DVKSLGSVQL INDRCVDMQR SRHEKKKGAE</p> <p>EEKPKRRRQE KQAACPFYNH EQMGLLRDEA LAEVKDMEQL LALGKEARAC PYYGSRLAIP</p> <p>AAQLVVLPIYQ MLLHAATRQA AGIRLQDQVV IIDEAHNLID TITGMHSVEV SGSQLCQAHS</p> <p>QLLQYVERYG KRLKAKNLMY LKQILYLLEK FVAVLGGNIK QNPNTQSLSQ TGTELKTIND</p> <p>FLFQSQIDNI NLFKVQRYCE KSMISRKLFG FTERYGAVFS SREQPKLAGF QQFLQSLQPR</p> <p>TTEALAAPAD ESQASTLRPA SPLMHIQGFL AALTANQDG RVILSRQGSL SQSTLKFLLL</p> <p>NPAVHFAQVV KECRAVVIAG GTMQPVSDFR QQLLACAGVE AERVVEFSCG HVIPPDNILP</p>

LVICSGISNQ PLEFTQKRE LPQMMDEVGR ILCNLCGVVP GGVVCFPSY EYLRQVHAHW
EKGGLLGRLA ARKKIFQEPK SAHQVEQVLL AYSRCIQACG QERGQVTGAL LLSVVGGKMS
EGINFSDNLG RCVVMVGMPF PNIRSAELQE KMAYLDQTLS PRPGTPREGS GGEPVHEGRQ
PVHRQGHQAP EGFCQRSAPG PAICPAPCPG QAAGLDPSPC GGQSYLWPRH CCCAEVSPGE
VGLFLMGNHT TAWRRALPLS CPLETVFVVG VVGDPVTKV KPRRRVWSPE CCQDPGTGVS
SRRRKWGNPE

Sequence without tag. The proposed Strep-Tag is based on experience s with the expression system, a different complexity of the protein could make another tag necessary. In case you have a special request, please contact us.

Characteristics:

Key Benefits:

- Made in Germany - from design to production - by highly experienced protein experts.
- Protein expressed with ALiCE® and purified in one-step affinity chromatography
- These proteins are normally active (enzymatically functional) as our customers have reported (not tested by us and not guaranteed).
- State-of-the-art algorithm used for plasmid design (Gene synthesis).

This protein is a **made-to-order protein** and will be made for the first time for your order. Our experts in the lab try to ensure that you receive soluble protein.

The big advantage of ordering our **made-to-order proteins** in comparison to ordering custom made proteins from other companies is that there is no financial obligation in case the protein cannot be expressed or purified.

Expression System:

- ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from *Nicotiana tabacum* c.v.. This contains all the protein expression machinery needed to produce even the most difficult-to-express proteins, including those that require post-translational modifications.
- During lysate production, the cell wall and other cellular components that are not required for protein production are removed, leaving only the protein production machinery and the mitochondria to drive the reaction. During our lysate completion steps, the additional components needed for protein production (amino acids, cofactors, etc.) are added to produce something that functions like a cell, but without the constraints of a living system - all that's needed is the DNA that codes for the desired protein!

Concentration:

- The concentration of our recombinant proteins is measured using the absorbance at 280nm.
- The protein's absorbance will be measured against its specific reference buffer.

Product Details

- We use the ExPASy's ProtParam tool to determine the absorption coefficient of each protein.

Purification:	One-step Strep-tag purification of proteins expressed in Almost Living Cell-Free Expression System (ALICE®).
Purity:	> 70-80 % as determined by SDS PAGE, Western Blot and analytical SEC (HPLC).
Grade:	custom-made

Target Details

Target:	DDX11
Alternative Name:	DDX11 (DDX11 Products)
Background:	<p>ATP-dependent DNA helicase DDX11 (EC 3.6.4.12) (CHL1-related protein 1) (hCHLR1) (DEAD/H-box protein 11) (Keratinocyte growth factor-regulated gene 2 protein) (KRG-2),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</p>

Target Details

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). {ECO:0000250|UniProtKB:Q6AXC6, ECO:0000269|PubMed:10648783, ECO:0000269|PubMed:17105772, ECO:0000269|PubMed:18499658, ECO:0000269|PubMed:20124417, ECO:0000269|PubMed:21854770, ECO:0000269|PubMed:22102414, ECO:0000269|PubMed:23116066, ECO:0000269|PubMed:23797032, ECO:0000269|PubMed:26089203, ECO:0000269|PubMed:26503245, ECO:0000269|PubMed:27477908}., FUNCTION: (Microbial infection) Required for bovine papillomavirus type 1 regulatory protein E2 loading onto mitotic chromosomes during DNA replication for the viral genome to be maintained and segregated. {ECO:0000269|PubMed:17189189}.

Molecular Weight:	108.3 kDa
UniProt:	Q96FC9
Pathways:	ER-Nucleus Signaling

Application Details

Application Notes:	In addition to the applications listed above we expect the protein to work for functional studies as well. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.
Comment:	ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from <i>Nicotiana tabacum</i> c.v.. This contains all the protein expression machinery needed to produce even the most difficult-to-express proteins, including those that require post-translational modifications. During lysate production, the cell wall and other cellular components that are not required for

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protein production are removed, leaving only the protein production machinery and the mitochondria to drive the reaction. During our lysate completion steps, the additional components needed for protein production (amino acids, cofactors, etc.) are added to produce something that functions like a cell, but without the constraints of a living system - all that's needed is the DNA that codes for the desired protein!

Restrictions: For Research Use only

Handling

Format: Liquid

Buffer: The buffer composition is at the discretion of the manufacturer.
Standard Storage Buffer: PBS pH 7.4, 10 % Glycerol **Might differ depending on protein.**

Handling Advice: Avoid repeated freeze-thaw cycles.

Storage: -80 °C

Storage Comment: Store at -80°C.

Expiry Date: 12 months