

Datasheet for ABIN3078828

DDX58 Protein (AA 1-925) (Strep Tag)



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Overview

Quantity:	250 µg
Target:	DDX58
Protein Characteristics:	AA 1-925
Origin:	Human
Source:	Cell-free protein synthesis (CFPS)
Protein Type:	Recombinant
Purification tag / Conjugate:	This DDX58 protein is labelled with Strep Tag.
Application:	SDS-PAGE (SDS), Western Blotting (WB), ELISA

Product Details

Brand:	AliCE®
Sequence:	<p>MTTEQRRSLQ AFQDYIRKTL DPTYILSYMA PWFREEEVQY IQAEKNNGKP MEAATLFLKF</p> <p>LLELQEEGWF RGFLDALDHA GYSGLYEAI SWDFKKIEKL EYRLLKRL QPEFKTRIIP</p> <p>TDIISDLSEC LINQECCEIL QICSTKGMMA GAEKLVECLL RSDKENWPKT LKLAL EKERN</p> <p>KFSELWIVEK GIKDVETEDL EDKMETSDIQ IFYQEDPECQ NLENSCPS EVSDTNLYSP</p> <p>FKPRNYQLEL ALPAMKGKNT IICAPTGCGK TFSLLICEH HLKFPQGQK GKVVFFANQI</p> <p>PVYEQQKSVF SKYFERHGYR VTGISGATAE NVPVEQIVEN NDIILTPQI LVNNLKKGTI</p> <p>PSLSIFTLMI FDECHNTSKQ HPYNMIMFNY LDQKLGGSSG PLPQVIGLTA SVGVGDAKNT</p> <p>DEALDYICKL CASLDASVIA TVKHNL EELE QVVYKPQKFF RKVESRISDK FKYIAQLMR</p> <p>DTESLAKRIC KDLENLSQIQ NREFGTQKYE QWIVTVQKAC MVFQMPDKDE ESRICKALFL</p> <p>YTSHLRKYND ALIISEHARM KDALDYLKDF FSNVRAAGFD EIEQDLTQRF EEKLQELESV</p> <p>SRDPSNENPK LEDLCFILQE EYHLNPETIT ILFVKTRALV DALKNWIEGN PKLSFLKPGI</p>

LTGRGKTNQN TGMTLPAQKC ILDAFKASGD HNLIATSV A DEGIDIAQCN LVILYEYVGN
VIKMIQTRGR GRARGSKCFL LTSNAGVIEK EQINMYKEKM MNDSILRLQT WDEAVFREKI
LHIQTHEKFI RDSQEKPKPV PDKENKKLLC RKCKALACYT ADVRVIEECH YTVLGDAFKE
CFVSRPHPKP KQFSSF EKRA KIFCARQNCS HDWGIHVKYK TFEIPVIEKIE SFVVEDIATG
VQTLYSKWKD FHFEKIPFDP AEMSK

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

Product Details

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:	DDX58
Alternative Name:	RIGI (DDX58 Products)
Background:	<p>Antiviral innate immune response receptor RIG-I (ATP-dependent RNA helicase DDX58) (EC 3.6.4.13) (DEAD box protein 58) (RIG-I-like receptor 1) (RLR-1) (RNA sensor RIG-I) (Retinoic acid-inducible gene 1 protein) (RIG-1) (Retinoic acid-inducible gene I protein) (RIG-I),FUNCTION: Innate immune receptor that senses cytoplasmic viral nucleic acids and activates a downstream signaling cascade leading to the production of type I interferons and pro-inflammatory cytokines (PubMed:15208624, PubMed:16125763, PubMed:15708988, PubMed:16127453, PubMed:16153868, PubMed:17190814, PubMed:18636086, PubMed:19122199, PubMed:19211564, PubMed:29117565, PubMed:28469175, PubMed:31006531, PubMed:34935440, PubMed:35263596, PubMed:36793726). Forms a ribonucleoprotein complex with viral RNAs on which it homooligomerizes to form filaments (PubMed:15208624, PubMed:15708988). The homooligomerization allows the recruitment of RNF135 an E3 ubiquitin-protein ligase that activates and amplifies the RIG-I-mediated antiviral signaling in an RNA length-dependent manner through ubiquitination-dependent and -independent mechanisms (PubMed:28469175, PubMed:31006531). Upon activation, associates with mitochondria antiviral signaling protein (MAVS/IPS1) that activates the IKK-related kinases TBK1 and IKKε which in turn phosphorylate the interferon regulatory factors IRF3 and IRF7, activating transcription of antiviral immunological genes including the IFN-α and IFN-β interferons (PubMed:28469175, PubMed:31006531). Ligands include 5'-triphosphorylated ssRNAs and dsRNAs but also short dsRNAs (<1 kb in length) (PubMed:15208624, PubMed:15708988, PubMed:19576794, PubMed:19609254, PubMed:21742966). In addition to the 5'-triphosphate moiety, blunt-end base pairing at the 5'-end of the RNA is very essential (PubMed:15208624, PubMed:15708988, PubMed:19576794, PubMed:19609254, PubMed:21742966). Overhangs at the non-triphosphorylated end of the dsRNA RNA have no major impact on its activity (PubMed:15208624, PubMed:15708988,</p>

Target Details

PubMed:19576794, PubMed:19609254, PubMed:21742966). A 3'overhang at the 5'triphosphate end decreases and any 5'overhang at the 5' triphosphate end abolishes its activity (PubMed:15208624, PubMed:15708988, PubMed:19576794, PubMed:19609254, PubMed:21742966). Detects both positive and negative strand RNA viruses including members of the families Paramyxoviridae: Human respiratory syncytial virus and measles virus (MeV), Rhabdoviridae: vesicular stomatitis virus (VSV), Orthomyxoviridae: influenza A and B virus, Flaviviridae: Japanese encephalitis virus (JEV), hepatitis C virus (HCV), dengue virus (DENV) and west Nile virus (WNV) (PubMed:21616437, PubMed:21884169). It also detects rotaviruses and reoviruses (PubMed:21616437, PubMed:21884169). Detects and binds to SARS-CoV-2 RNAs which is inhibited by m6A RNA modifications (Ref.69). Also involved in antiviral signaling in response to viruses containing a dsDNA genome such as Epstein-Barr virus (EBV) (PubMed:19631370). Detects dsRNA produced from non-self dsDNA by RNA polymerase III, such as Epstein-Barr virus-encoded RNAs (EBERs). May play important roles in granulocyte production and differentiation, bacterial phagocytosis and in the regulation of cell migration. {ECO:0000269|PubMed:15208624, ECO:0000269|PubMed:15708988, ECO:0000269|PubMed:16125763, ECO:0000269|PubMed:16127453, ECO:0000269|PubMed:16153868, ECO:0000269|PubMed:17190814, ECO:0000269|PubMed:18636086, ECO:0000269|PubMed:19122199, ECO:0000269|PubMed:19211564, ECO:0000269|PubMed:19576794, ECO:0000269|PubMed:19609254, ECO:0000269|PubMed:19631370, ECO:0000269|PubMed:21742966, ECO:0000269|PubMed:28469175, ECO:0000269|PubMed:29117565, ECO:0000269|PubMed:31006531, ECO:0000269|PubMed:34935440, ECO:0000269|PubMed:35263596, ECO:0000269|PubMed:36793726, ECO:0000269|Ref.69, ECO:0000303|PubMed:21616437, ECO:0000303|PubMed:21884169}.

Molecular Weight: 106.6 kDa

UniProt: [O95786](#)

Pathways: [Activation of Innate immune Response](#), [Hepatitis C](#)

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

Application Details

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.

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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