Datasheet for ABIN3096424

ZC3H12A Protein (AA 1-599) (Strep Tag)

1 Image

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Overview

Quantity:	1 mg
Target:	ZC3H12A
Protein Characteristics:	AA 1-599
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This ZC3H12A protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Sequence:	MSGPCGEKPV LEASPTMSLW EFEDSHSRQG TPRPGQELAA EEASALELQM KVDFFRKLGY SSTEIHSVLQ KLGVQADTNT VLGELVKHGT ATERERQTSP DPCPQLPLVP RGGGTPKAPN LEPPLPEEEK EGSDLRPVVI DGSNVAMSHG NKEVFSCRGI LLAVNWFLER GHTDITVFVP SWRKEQPRPD VPITDQHILR ELEKKKILVF TPSRRVGGKR VVCYDDRFIV KLAYESDGIV VSNDTYRDLQ GERQEWKRFI EERLLMYSFV NDKFMPPDDP LGRHGPSLDN FLRKKPLTLE HRKQPCPYGR KCTYGIKCRF FHPERPSCPQ RSVADELRAN ALLSPPRAPS KDKNGRRPSP SSQSSSLLTE SEQCSLDGKK LGAQASPGSR QEGLTQTYAP SGRSLAPSGG SGSSFGPTDW LPQTLDSLPY VSQDCLDSGI GSLESQMSEL WGVRGGGPGE PGPPRAPYTG YSPYGSELPA TAAFSAFGRA MGAGHFSVPA DYPPAPPAFP PREYWSEPYP LPPPTSVLQE PPVQSPGAGR SPWGRAGSLA KEQASVYTKL CGVFPPHLVE AVMGRFPQLL DPQQLAAEIL SYKSQHPSE **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 by multi-step, protein-specific process to ensure correct folding and modification.
- 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 will ensure that you receive a correctly folded 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 in several dilutions and is measured against its specific reference buffer.
- We use the Expasy's ProtParam tool to determine the absorption coefficient of each protein.

Purification:

Two step purification of proteins expressed in Almost Living Cell-Free Expression System (ALiCE®):

1. In a first purification step, the protein is purified from the cleared cell lysate using StrepTag capture material. Eluate fractions are analyzed by SDS-PAGE.

Product Details

	2. Protein containing fractions of the best purification are subjected to second purification step through size exclusion chromatography. Eluate fractions are analyzed by SDS-PAGE and Western blot.
Purity:	>80 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.
Endotoxin Level:	Low Endotoxin less than 1 EU/mg (< 0.1 ng/mg)
Grade:	Crystallography grade

Target Details

Target:	ZC3H12A
Alternative Name:	ZC3H12A (ZC3H12A Products)
Background:	Endoribonuclease ZC3H12A (EC 3.1.-.-) (Monocyte chemotactic protein-induced protein 1) (MCP-induced protein 1) (MCPIP-1) (Regnase-1) (Reg1) (Zinc finger CCCH domain-containing protein 12A),FUNCTION: Endoribonuclease involved in various biological functions such as cellular inflammatory response and immune homeostasis, glial differentiation of neuroprogenitor cells, cell death of cardiomyocytes, adipogenesis and angiogenesis. Functions as an endoribonuclease involved in mRNA decay (PubMed:19909337). Modulates the inflammatory response by promoting the degradation of a set of translationally active cytokine-induced inflammation-related mRNAs, such as IL6 and IL12B, during the early phase of inflammation (PubMed:26320658). Prevents aberrant T-cell-mediated immune reaction by degradation of multiple mRNAs controlling T-cell activation, such as those encoding cytokines (IL6 and IL2), cell surface receptors (ICOS, TNFRSF4 and TNFR2) and transcription factor (REL) (By similarity). Inhibits cooperatively with ZC3H12A the differentiation of helper T cells Th17 in lungs. They repress target mRNA encoding the Th17 cell-promoting factors IL6, ICOS, REL, IRF4, NFKBID and NFKBIZ. The cooperation requires RNA-binding by RC3H1 and the nuclease activity of ZC3H12A (By similarity). Together with RC3H1, destabilizes TNFRSF4/OX40 mRNA by binding to the conserved stem loop structure in its 3'UTR (By similarity). Self regulates by destabilizing its own mRNA (By similarity). Cleaves mRNA harboring a stem-loop (SL), often located in their 3'-UTRs, during the early phase of inflammation in a helicase UPF1-dependent manner (PubMed:19909337, PubMed:26320658, PubMed:26134560, PubMed:22561375). Plays a role in the inhibition of microRNAs (miRNAs) biogenesis (PubMed:22055188). Cleaves the terminal loop of a set of precursor miRNAs (pre-miRNAs) important for the regulation of the inflammatory response leading to their degradation, and thus preventing the biosynthesis of mature miRNAs (PubMed:22055188). Also plays a role in promoting angiogenesis in response to inflammatory cytokines by inhibiting the production of antiangiogenic microRNAs via its anti-

	dicer RNase activity (PubMed:24048733). Affects the overall ubiquitination of cellular proteins (By similarity). Positively regulates deubiquitinase activity promoting the cleavage at 'Lys-48'- and 'Lys-63'-linked polyubiquitin chains on TNF receptor-associated factors (TRAFs), preventing JNK and NF-kappa-B signaling pathway activation, and hence negatively regulating macrophage-mediated inflammatory response and immune homeostasis (By similarity). Induces also deubiquitination of the transcription factor HIF1A, probably leading to its stabilization and nuclear import, thereby positively regulating the expression of proangiogenic HIF1A-targeted genes (PubMed:24048733). Involved in a TANK-dependent negative feedback response to attenuate NF-kappaB activation through the deubiquitination of IKBKG or TRAF6 in response to interleukin-1-beta (IL1B) stimulation or upon DNA damage (PubMed:25861989). Prevents stress granule (SGs) formation and promotes macrophage apoptosis under stress conditions, including arsenite-induced oxidative stress, heat shock and energy deprivation (By similarity). Plays a role in the regulation of macrophage polarization, promotes IL4-induced polarization of macrophages M1 into anti-inflammatory M2 state (By similarity). May also act as a transcription factor that regulates the expression of multiple genes involved in inflammatory response, angiogenesis, adipogenesis and apoptosis (PubMed:16574901, PubMed:18364357). Functions as a positive regulator of glial differentiation of neuroprogenitor cells through an amyloid precursor protein (APP)-dependent signaling pathway (PubMed:19185603). Attenuates septic myocardial contractile dysfunction in response to lipopolysaccharide (LPS) by reducing I-kappa-B-kinase (IKK)-mediated NF-kappa-B activation, and hence myocardial pro-inflammatory cytokine production (By similarity). {ECO:0000250|UniProtKB:Q5D1E7, ECO:0000269|PubMed:16574901, ECO:0000269|PubMed:18364357, ECO:0000269|PubMed:19185603, ECO:0000269|PubMed:19909337, ECO:0000269|PubMed:22055188, ECO:0000269|PubMed:22561375, ECO:0000269|PubMed:24048733, ECO:0000269|PubMed:25861989, ECO:0000269|PubMed:26134560, ECO:0000269|PubMed:26320658}., FUNCTION: (Microbial infection) Binds to Japanese encephalitis virus (JEV) and Dengue virus (DEN) RNAs. {ECO:0000269|PubMed:23355615}., FUNCTION: (Microbial infection) Exhibits antiviral activity against HIV-1 in lymphocytes by decreasing the abundance of HIV-1 viral RNA species. {ECO:0000269|PubMed:24191027}.
Molecular Weight:	65.7 kDa
UniProt:	Q5D1E8
Pathways:	Cellular Response to Molecule of Bacterial Origin, Positive Regulation of fat Cell Differentiation

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 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!
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	The buffer composition is at the discretion of the manufacturer. If you have a special request, please contact us.
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	Unlimited (if stored properly)

Image 1. „Crystallography Grade“ protein due to multi-step, protein-specific purification process