Datasheet for ABIN3096424

ZC3H12A Protein (AA 1-599) (His tag)

1 Image

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Overview

Quantity:	1 mg
Target:	ZC3H12A
Protein Characteristics:	AA 1-599
Origin:	Human
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This ZC3H12A protein is labelled with His tag.
Application:	ELISA, Western Blotting (WB), Crystallization (Crys), 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. Tag location is at the discretion of the manufacturer. If you have a special request, please contact us.**

Product Details

Characteristics:	• Made in Germany - from design to production - by highly experienced protein experts. • Human ZC3H12A Protein (raised in Insect Cells) purified by multi-step, protein-specific process to ensure crystallization grade. • 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. In the unlikely event that the protein cannot be expressed or purified we do not charge anything (other companies might charge you for any performed steps in the expression process for custom-made proteins, e.g. fees might apply for the expression plasmid, the first expression experiments or purification optimization). When you order this made-to-order protein you will only pay upon receival of the correctly folded protein. With no financial risk on your end you can rest assured that our experienced protein experts will do everything to make sure that you receive the protein you ordered. 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. The concentration of the protein is calculated using its specific absorption coefficient. We use the Expasy's protparam tool to determine the absorption coefficient of each protein.
Purification:	Two step purification of proteins expressed in baculovirus infected SF9 insect cells: 1. In a first purification step, the protein is purified from the cleared cell lysate using three different His-tag capture materials: high yield, EDTA resistant, or DTT resistant. Eluate fractions are analyzed by SDS-PAGE. 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:	>95 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.
Sterility:	0.22 µm filtered
Endotoxin Level:	Protein is endotoxin free.
Grade:	Crystallography grade

Target Details

Target:	ZC3H12A
Alternative Name:	ZC3H12A (ZC3H12A Products)
Background:	Bifunctional enzyme with both endoribonuclease and deubiquitinase activities 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). 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). Plays also 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). Functions as a deubiquitinase that affects the overall ubiquitination of cellular proteins (By similarity). Possesses deubiquitinase activity that specifically cleaves '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 regulates macrophage-mediated inflammatory response and immune homeostasis (By similarity). Deubiquitinates also the transcription factor HIF1A, probably leading to its stabilization and nuclear import, thereby positively regulating the expression of proangiogenic HIF1A-targeted genes (PubMed:24048733). Prevents stress granule (SGs) formation and promotes macrophage apoptosis under stress conditions, including arsenite-induced oxidative stress, heat shock, and energy deprivation, which may be dependent on its deubiquitinase activity (By similarity). Plays a role in the regulation of macrophage polarization, promotes IL4-induced polarization of macrophages M1 into anti-inflammatory M2 state, depending on both endoribonuclease and deubiquitinase activities (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

Target Details

	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 proinflammatory 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:26134560, ECO:0000269|PubMed:26320658}., (Microbial infection) Exhibits broad antiviral activity by cleaving viral RNAs (PubMed:23355615). Binds to Japanese encephalitis virus (JEV) and dengue virus (DEN) RNAs (PubMed:23355615). Exhibits antiviral activity against HIV-1 in lymphocytes by decreasing the abundance of HIV-1 viral RNA species (PubMed:24191027). {ECO:0000269|PubMed:23355615, ECO:0000269|PubMed:24191027}.
Molecular Weight:	66.7 kDa Including tag.
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 gurantee though.
Comment:	In cases in which it is highly likely that the recombinant protein with the default tag will be insoluble our protein lab may suggest a higher molecular weight tag (e.g. GST-tag) instead to increase solubility. We will discuss all possible options with you in detail to assure that you receive your protein of interest.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	100 mM NaCL, 20 mM Hepes, 10% glycerol. pH value is at the discretion of the manufacturer.
Handling Advice:	Avoid repeated freeze-thaw cycles.

Handling

Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	Unlimited (if stored properly)

Images

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