

Datasheet for ABIN3091442

C9ORF72 Protein (AA 1-481) (Strep Tag)[Go to Product page](#)**1** Image

Overview

Quantity:	1 mg
Target:	C9ORF72
Protein Characteristics:	AA 1-481
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This C9ORF72 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Sequence:	<p>MSTLCPPSP AVAKTEIALS GKSPLLAATF AYWDNILGPR VRHIWAPKTE QVLLSDGEIT FLANHTLNGE ILRNAESGAI DVKFFVLSEK GVIIVSLIFD GNWNGDRSTY GLSIILPQTE LSFYLP LHRV CVDRLTHIIR KGRIWMHKER QENVQKIILE GTERMEDQGQ SIIPMLTGEV IPVMELLSSM KSHSVPEEID IADTVLNDDD IGDSCHEGFL LNAISSHLQT CGCSVVVGSS AEKVNKIVRT LCLFLTPAER KCSRLCEAES SFKYESGLFV QGLLKDSTGS FVLPFRQVMY APYPTTHIDV DVNTVKQMPP CHEHIYNQRR YMRSELTAFW RATSEEDMAQ DTIIYTDSEF TPDLNIFQDV LHRDTLVKAF LDQVFQLKPG LSLRSTFLAQ FLLVLHRKAL TLIKIYEDDT QKGKKPFKSL RNLKIDLDLT AEGDLNIIMA LAEKIKPGLH SFIFGRPFYT SVQERDVLMT F</p> <p>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.</p>
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Characteristics:	Key Benefits:
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- 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.
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.

Product Details

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:	C9ORF72
Alternative Name:	C9orf72 (C9ORF72 Products)
Background:	<p>Guanine nucleotide exchange factor C9orf72,FUNCTION: Component of the C9orf72-SMCR8 complex, a complex that has guanine nucleotide exchange factor (GEF) activity and regulates autophagy (PubMed:27193190, PubMed:27103069, PubMed:27617292, PubMed:28195531, PubMed:32303654). In the complex, C9orf72 and SMCR8 probably constitute the catalytic subunits that promote the exchange of GDP to GTP, converting inactive GDP-bound RAB8A and RAB39B into their active GTP-bound form, thereby promoting autophagosome maturation (PubMed:27103069). The C9orf72-SMCR8 complex also acts as a regulator of autophagy initiation by interacting with the ULK1/ATG1 kinase complex and modulating its protein kinase activity (PubMed:27617292). As part of the C9orf72-SMCR8 complex, stimulates RAB8A and RAB11A GTPase activity in vitro (PubMed:32303654). Positively regulates initiation of autophagy by regulating the RAB1A-dependent trafficking of the ULK1/ATG1 kinase complex to the phagophore which leads to autophagosome formation (PubMed:27334615). Acts as a regulator of mTORC1 signaling by promoting phosphorylation of mTORC1 substrates (PubMed:27559131). Plays a role in endosomal trafficking (PubMed:24549040). May be involved in regulating the maturation of phagosomes to lysosomes (By similarity). Promotes the lysosomal localization and lysosome-mediated degradation of CARM1 which leads to inhibition of starvation-induced lipid metabolism (By similarity). Regulates actin dynamics in motor neurons by inhibiting the GTP-binding activity of ARF6, leading to ARF6 inactivation (PubMed:27723745). This reduces the activity of the LIMK1 and LIMK2 kinases which are responsible for phosphorylation and inactivation of cofilin, leading to CFL1/cofilin activation (PubMed:27723745). Positively regulates axon extension and axon growth cone size in spinal motor neurons (PubMed:27723745). Required for SMCR8 protein expression and localization at pre- and post-synaptic compartments in the forebrain, also regulates protein abundance of RAB3A and GRIA1/GLUR1 in post-synaptic compartments in the forebrain and hippocampus (By similarity). Plays a role within the hematopoietic system in restricting inflammation and the development of autoimmunity (By similarity). {ECO:0000250 UniProtKB:Q6DFW0, ECO:0000269 PubMed:24549040, ECO:0000269 PubMed:27103069,</p>

Target Details

ECO:0000269|PubMed:27193190, ECO:0000269|PubMed:27334615, ECO:0000269|PubMed:27559131, ECO:0000269|PubMed:27617292, ECO:0000269|PubMed:27723745, ECO:0000269|PubMed:28195531, ECO:0000269|PubMed:32303654}., FUNCTION: [Isoform 1]: Regulates stress granule assembly in response to cellular stress. {ECO:0000269|PubMed:27037575}., FUNCTION: [Isoform 2]: Does not play a role in regulation of stress granule assembly in response to cellular stress. {ECO:0000269|PubMed:27037575}.

Molecular Weight: 54.3 kDa

UniProt: [Q96LT7](#)

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.

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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

Handling

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