

Datasheet for ABIN3086818

QRICH1 Protein (AA 1-776) (Strep Tag)



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1 Image

Overview

Quantity:	1 mg
Target:	QRICH1
Protein Characteristics:	AA 1-776
Origin:	Human
Source:	Tobacco (<i>Nicotiana tabacum</i>)
Protein Type:	Recombinant
Purification tag / Conjugate:	This QRICH1 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Sequence: MNNSLENTIS FEEYIRVKAR SVPQHRMKEF LDSLASKGPE ALQEFQQTAT TTMVYQQGGN
 CIYTDSTEVA GSLELACPV TTSVQPQTQQ EQQIQVQQPQ QVQVQVQVQQ SPQQVSAQLS
 PQLTVHQPTE QPIQVQVQIQ GQAPQSAAPS IQTPSLQSPS PSQLQAAQIQ VQHVQAAQIQ
 QAAEIP EEHI PHQQIQAQLV AGQSLAGGQQ IQIQTVGALS PPPSQQGSPPR EGERRVGTAS
 VLQPVKRKRKV DMPITVSYAI SGQP VATVLA IPQGQQQSYV SLRPDLLTVD SAHLYSATGT
 ITSPTGETWT IPVYSAQPRG DPQQQSITHI AIPQEAYNAV HVSGSPTALA AVKLEDDKEK
 MVGTTSSVKN SHEEVVQTLA NSLFPAQFMN GNIHIPVAVQ AVAGTYQNTA QTVHIWDPQQ
 QPQQQTPQEQ TPPPQQQQQQ LQVTCSAQTV QVAEVEPQSQ PQPSPELLLP NSLKPEEGLE
 VWKNWAQTKN AELEKDAQNR LAPIGRRQLL RFQEDLISSA VAELNYGLCL MTREARNNEG
 EPYDPDVLYY IFLCIQKYL F ENGRVDDIFS DLYYVRFTEW LHEVLKDVQP RVTPLGYVLP
 SHVTEMLWE CKQLGAHSPS TLLTTLMFFN TKYFLLKTVD QHMKLAFSKV LRQTKKNPSN
 PKDKSTSIRY LKALGIHQTG QKVTDDMYAE QTENPENPLR CPIKLYDFYL FKCPQSVKGR

NDTFYLTPEP VVAPNSPIWY SVQPISREQM GQMLTRILVI REIQEAIAVA NASTMH

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

Product Details

(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.

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: QRICH1

Alternative Name: QRICH1 ([QRICH1 Products](#))

Background: Transcriptional regulator QRICH1 (Glutamine-rich protein 1),FUNCTION: Transcriptional regulator that acts as a mediator of the integrated stress response (ISR) through transcriptional control of protein homeostasis under conditions of ER stress (PubMed:33384352). Controls the outcome of the unfolded protein response (UPR) which is an ER-stress response pathway (PubMed:33384352). ER stress induces QRICH1 translation by a ribosome translation re-initiation mechanism in response to EIF2S1/eIF-2-alpha phosphorylation, and stress-induced QRICH1 regulates a transcriptional program associated with protein translation, protein secretion-mediated proteotoxicity and cell death during the terminal UPR (PubMed:33384352). May cooperate with ATF4 transcription factor signaling to regulate ER homeostasis which is critical for cell viability (PubMed:33384352). Up-regulates CASP3/caspase-3 activity in epithelial cells under ER stress. Central regulator of proteotoxicity associated with ER stress-mediated inflammatory diseases in the intestines and liver (PubMed:33384352). Involved in chondrocyte hypertrophy, a process required for normal longitudinal bone growth (PubMed:30281152). {ECO:0000269|PubMed:30281152, ECO:0000269|PubMed:33384352}.

Molecular Weight: 86.4 kDa

UniProt: [Q2TAL8](#)

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

Application Details

guarantee though.

Comment:

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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

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