Datasheet for ABIN3121982

QRICH1 Protein (AA 1-777) (Strep Tag)

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Overview

Quantity:	250 µg
Target:	QRICH1
Protein Characteristics:	AA 1-777
Origin:	Mouse
Source:	Cell-free protein synthesis (CFPS)
Protein Type:	Recombinant
Purification tag / Conjugate:	This QRICH1 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Brand:	AliCE®
Sequence:	MNNSLENTIS FEEYIRVKAR SVPQHRMKEF LDSLASKGPE ALQEFQQTAT TTMVYQQGGN CIYTDSTEVA GSLLELACPV TTSVQPQTQQ EQQIQVQQPQ QVQVQVQVQQ SPQQVSAQQL SPQFTVHQPA EQPIQVQVQI QGQAPQSAAP SIQTPSLQSP SPSQLQAAQI QVQHVQAAQQ IQAAEIPEEH IPHQQIQAQL VAGQSLAGGQ QIQIQTVGAL SPPPSQQGSP REGERRVGTA SVLQPVKKRK VDMPITVSYA ISGQPVATVL AIPQGQQQSY VSLRPDLLTV DSAHLYSATG TITSPTGETW TIPVYSAQPR GDPQQQSITH IAIPQEAYNA VHVSGSPKAL AAVKLEDDKE KMVGTTSVVK NSHEEVVQTL ANSLFPAQFM NGNIHIPVAV QAVAGTYQNT AQTVHIWDPQ QQPQQQTAQE QTPPPQQQQQ QLQVTCSAQT VQVAEVEPQS QPQPSPELLL PNSLKPEEGL EVWKNWAQTK NAELEKDAQN RLAPIGRRQL LRFQEDLISS AVAELNYGLC LMTREARNGE GEPYDPDVLY YIFLCIQKYL FENGRVDDIF SDLYYVRFTE WLHEVLKDVQ PRVTPLGYVL PSHVTEEMLW ECKQLGAHSP STLLTTLMFF NTKYFLLKTV DQHMKLAFSK VLRQTKKSPS

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NPKDKSTSIR YLKALGIHQT GQKVTDDMYA EQTENPENPL RCPIKLYDFY LFKCPQSVKG RNDTFYLTPE PVVAPNSPIW YSVQPISREQ MGQMLTRILV IREIQEAIAV ANATTMH

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.

Purification:

One-step Strep-tag purification of proteins expressed in Almost Living Cell-Free Expression System (AliCE®).

Product Details

Purity:	> 70-80 % as determined by SDS PAGE, Western Blot and analytical SEC (HPLC).
Grade:	custom-made

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), an ER-stress response pathway that either promotes recovery of ER homeostasis and cell survival, or triggers the terminal UPR which elicits programmed cell death when ER stress is prolonged and unresolved (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 (By similarity). May cooperate with ATF4 transcription factor signaling to regulate ER homeostasis which is critical for cell viability (By similarity). 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:0000250|UniProtKB:Q2TAL8, ECO:0000269|PubMed:30281152, ECO:0000269|PubMed:33384352}.
Molecular Weight:	86.6 kDa
UniProt:	Q3UA37

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

Application Details

	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. 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

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