Datasheet for ABIN3086864

QKI Protein (AA 1-341) (Strep Tag)

Go to Product page

Overview

Quantity:	1 mg
Target:	QKI
Protein Characteristics:	AA 1-341
Origin:	Human
Source:	Cell-free protein synthesis (CFPS)
Protein Type:	Recombinant
Purification tag / Conjugate:	This QKI protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Brand:	AliCE®
Sequence:	MVGEMETKEK PKPTPDYLMQ LMNDKKLMSS LPNFCGIFNH LERLLDEEIS RVRKDMYNDT LNGSTEKRSA ELPDAVGPIV QLQEKLYVPV KEYPDFNFVG RILGPRGLTA KQLEAETGCK IMVRGKGSMR DKKKEEQNRG KPNWEHLNED LHVLITVEDA QNRAEIKLKR AVEEVKKLLV PAAEGEDSLK KMQLMELAIL NGTYRDANIK SPALAFSLAA TAQAAPRIIT GPAPVLPPAA LRTPTPAGPT IMPLIRQIQT AVMPNGTPHP TAAIVPPGPE AGLIYTPYEY PYTLAPATSI LEYPIEPSGV LGAVATKVRR HDMRVHPYQR IVTADRAATG N **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:

Product Details

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

Target Details

Target:	QKI

Target Details

Alternative Name:	QKI (QKI Products)
Background:	KH domain-containing RNA-binding protein QKI (Protein quaking) (Hqk) (HqkI),FUNCTION: RNA reader protein, which recognizes and binds specific RNAs, thereby regulating RNA metabolic processes, such as pre-mRNA splicing, circular RNA (circRNA) formation, mRNA export, mRNA stability and/or translation (PubMed:22398723, PubMed:25768908, PubMed:27029405, PubMed:31331967, PubMed:23630077, PubMed:37379838). Involved in various cellular processes, such as mRNA storage into stress granules, apoptosis, lipid deposition, interferon response, glial cell fate and development (PubMed:25768908, PubMed:31829086, PubMed:34428287, PubMed:37379838). Binds to the 5'-NACUAAY-N(1,20)-UAAY-3' RNA core sequence (PubMed:23630077). Acts as a mRNA modification reader that specifically recognizes and binds mRNA transcripts modified by internal N(7)-methylguanine (m7G) (PubMed:37379838). Promotes the formation of circular RNAs (circRNAs) during the epithelial to mesenchymal transition and in cardiomyocytes: acts by binding to sites flanking circRNA-forming exons (PubMed:25768908). CircRNAs are produced by back-splicing circularization of pre-mRNAs (PubMed:25768908). Plays a central role in myelinization via 3 distinct mechanisms (PubMed:16641098). First, acts by protecting and promoting stability of target mRNAs such as MBP, SIRT2 and CDKN1B, which promotes oligodendrocyte differentiation (By similarity). Second, participates in mRNA transport by regulating the nuclear export of MBP mRNA (By similarity). Finally, indirectly regulates mRNA splicing of MAG pre-mRNA during oligodendrocyte differentiation by acting as a negative regulator of MAG exon 12 alternative splicing: acts by binding to HNRNPA1 mRNA splicing factor, preventing its translation (By similarity). Involved in microglia differentiation and remyelination by regulating microexon alternative splicing of the Rho GTPase pathway (By similarity). Involved in macrophage differentiation: promotes monocyte differentiation by regulating pre-mRNA splicing in naive peripheral blood monocytes (PubMed:27029405). Acts as an important regulator of muscle development: required for the contractile function of cardiomyocytes by regulating alternative splicing of cardiomyocyte transcripts (By similarity). Acts as a negative regulator of thermogenesis by decreasing stability, nuclear export and translation of mRNAs encoding PPARGC1A and UCP1 (By similarity). Also required for visceral endoderm function and blood vessel development (By similarity). May also play a role in smooth muscle development (PubMed:31331967). In addition to its RNA-binding activity, also acts as a nuclear transcription coactivator for SREBF2/SREBP2 (By similarity). {ECO:0000250|UniProtKB:Q9QYS9, ECO:0000269|PubMed:16641098, ECO:0000269|PubMed:22398723, ECO:0000269|PubMed:23630077, ECO:0000269|PubMed:25768908, ECO:0000269|PubMed:27029405, ECO:0000269|PubMed:31331967,

ECO:0000269|PubMed:31829086, ECO:0000269|PubMed:34428287, ECO:0000269|PubMed:37379838}., FUNCTION: [Isoform QKI5]: Nuclear isoform that acts as an indirect regulator of mRNA splicing (By similarity). Regulates mRNA splicing of MAG pre-mRNA by inhibiting translation of HNRNPA1 mRNA, thereby preventing MAG exon 12 alternative splicing (By similarity). Involved in oligodendrocyte differentiation by promoting stabilization of SIRT2 mRNA (By similarity). Acts as a negative regulator of the interferon response by binding to MAVS mRNA, downregulating its expression (PubMed:31829086). Also inhibits the interferon response by binding to fibrinectin FN1 pre-mRNA, repressing EDA exon inclusion in FN1 (PubMed:34428287). Delays macrophage differentiation by binding to CSF1R mRNA, promoting its degradation (PubMed:22398723). In addition to its RNA-binding activity, also acts as a nuclear transcription coactivator for SREBF2/SREBP2, promoting SREBF2/SREBP2-dependent cholesterol biosynthesis (By similarity). SREBF2/SREBP2-dependent cholesterol biosynthesis participates to myelinization and is required for eye lens transparency (By similarity). {ECO:0000250|UniProtKB:Q9QYS9, ECO:0000269|PubMed:22398723, ECO:0000269|PubMed:31829086, ECO:0000269|PubMed:34428287}., FUNCTION: [Isoform QKI6]: Cytosolic isoform that specifically recognizes and binds mRNA transcripts modified by internal N(7)-methylguanine (m7G) (PubMed:37379838). Interaction with G3BP1 promotes localization of m7G-containing mRNAs into stress granules in response to stress, thereby suppressing their translation (PubMed:37379838). Acts as a translational repressor for HNRNPA1 and GLI1 (By similarity). Translation inhibition of HNRNPA1 during oligodendrocyte differentiation prevents inclusion of exon 12 in MAG pre-mRNA splicing (By similarity). Involved in astrocyte differentiation by regulating translation of target mRNAs (By similarity). {ECO:0000250|UniProtKB:Q9QYS9, ECO:0000269|PubMed:37379838}., FUNCTION: [Isoform QKI7]: Cytosolic isoform that specifically recognizes and binds mRNA transcripts modified by internal N(7)-methylguanine (m7G) (PubMed:37379838). Interaction with G3BP1 promotes localization of m7G-containing mRNAs into stress granules in response to stress, thereby suppressing their translation (PubMed:37379838). Acts as a negative regulator of angiogenesis by binding to mRNAs encoding CDH5, NLGN1 and TNFAIP6, promoting their degradation (PubMed:32732889). Can also induce apoptosis in the cytoplasm (By similarity). Heterodimerization with other isoforms results in nuclear translocation of isoform QKI7 and suppression of apoptosis (By similarity). Also binds some microRNAs: promotes stabilitation of miR-122 by mediating recruitment of poly(A) RNA polymerase TENT2, leading to 3' adenylation and stabilization of miR-122 (PubMed:31792053). {ECO:0000250|UniProtKB:Q9QYS9, ECO:0000269|PubMed:31792053, ECO:0000269|PubMed:32732889, ECO:0000269|PubMed:37379838}.

Target Details

Molecular Weight:	37.7 kDa
UniProt:	Q96PU8

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. 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