Datasheet for ABIN3114460

DMPK Protein (AA 1-629) (Strep Tag)

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Overview

Quantity:	1 mg
Target:	DMPK
Protein Characteristics:	AA 1-629
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This DMPK protein is labelled with Strep Tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA

Product Details

Sequence:	MSAEVRLRRL QQLVLDPGFL GLEPLLDLLL GVHQELGASE LAQDKYVADF LQWAEPIVVR LKEVRLQRDD FEILKVIGRG AFSEVAVVKM KQTGQVYAMK IMNKWDMLKR GEVSCFREER DVLVNGDRRW ITQLHFAFQD ENYLYLVMEY YVGGDLLTLL SKFGERIPAE MARFYLAEIV MAIDSVHRLG YVHRDIKPDN ILLDRCGHIR LADFGSCLKL RADGTVRSLV AVGTPDYLSP EILQAVGGGP GTGSYGPECD WWALGVFAYE MFYGQTPFYA DSTAETYGKI VHYKEHLSLP LVDEGVPEEA RDFIQRLLCP PETRLGRGGA GDFRTHPFFF GLDWDGLRDS VPPFTPDFEG ATDTCNFDLV EDGLTAMVSG GGETLSDIRE GAPLGVHLPF VGYSYSCMAL RDSEVPGPTP MELEAEQLLE PHVQAPSLEP SVSPQDETAE VAVPAAVPAA EAEAEVTLRE LQEALEEEVL TRQSLSREME AIRTDNQNFA SQLREAEARN RDLEAHVRQL QERMELLQAE GATAVTGVPS PRATDPPSHL DGPPAVAVGQ CPLVGPGPMH RRHLLLPARV PRPGLSEALS LLLFAVVLSR AAALGCIGLV AHAGQLTAVW RRPGAARAP **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 (ALiCE®):

1. In a first purification step, the protein is purified from the cleared cell lysate using StrepTag

Product Details

	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:	DMPK
Alternative Name:	DMPK (DMPK Products)
Background:	Myotonin-protein kinase (MT-PK) (EC 2.7.11.1) (DM-kinase) (DMK) (DM1 protein kinase) (DMPK) (Myotonic dystrophy protein kinase),FUNCTION: Non-receptor serine/threonine protein kinase which is necessary for the maintenance of skeletal muscle structure and function. May play a role in myocyte differentiation and survival by regulating the integrity of the nuclear envelope and the expression of muscle-specific genes. May also phosphorylate PPP1R12A and inhibit the myosin phosphatase activity to regulate myosin phosphorylation. Also critical to the modulation of cardiac contractility and to the maintenance of proper cardiac conduction activity probably through the regulation of cellular calcium homeostasis. Phosphorylates PLN, a regulator of calcium pumps and may regulate sarcoplasmic reticulum calcium uptake in myocytes. May also phosphorylate FXYD1/PLM which is able to induce chloride currents. May also play a role in synaptic plasticity. {ECO:0000269|PubMed:10811636, ECO:0000269|PubMed:10913253, ECO:0000269|PubMed:11287000, ECO:0000269|PubMed:15598648, ECO:0000269|PubMed:21457715, ECO:0000269|PubMed:21949239}.
Molecular Weight:	69.4 kDa
UniProt:	Q09013
Pathways:	Regulation of Muscle Cell Differentiation, Synaptic Membrane, Skeletal Muscle Fiber Development

Application Details

Application Notes:	In addition to the applications listed above we expect the protein to work for functional studies

Application Details

	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. 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

