Datasheet for ABIN3114460

DMPK Protein (AA 1-629) (rho-1D4 tag)

1 Image

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Overview

Quantity:	1 mg
Target:	DMPK
Protein Characteristics:	AA 1-629
Origin:	Human
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This DMPK protein is labelled with rho-1D4 tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA, Crystallization (Crys)

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. Tag location is at the discretion of the manufacturer. If you have a

	special request, please contact us.
Characteristics:	• Made in Germany - from design to production - by highly experienced protein experts. • Human DMPK Protein (raised in Insect Cells) purified by multi-step, protein-specific process to ensure crystallization grade. • 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. In the unlikely event that the protein cannot be expressed or purified we do not charge anything (other companies might charge you for any performed steps in the expression process for custom-made proteins, e.g. fees might apply for the expression plasmid, the first expression experiments or purification optimization). When you order this made-to-order protein you will only pay upon receival of the correctly folded protein. With no financial risk on your end you can rest assured that our experienced protein experts will do everything to make sure that you receive the protein you ordered. 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. The concentration of the protein is calculated using its specific absorption coefficient. We use the Expasy's protparam tool to determine the absorption coefficient of each protein.
Purification:	Three step purification of membrane proteins expressed in baculovirus infected SF9 insect cells: 1. Membrane proteins are fractioned by ultracentrifugation and subsequently solubilized with different detergents (detergent screen). Samples are analyzed by Western blot. 2. The best performing detergent is used for solubilization and the proteins are purified via their rho1D4 tag via two rho1D4 antibody columns: one DTT resistant, the other one not. Eluate fractions are analyzed by Western blot. 3. Protein containing fractions of the best purification are subjected to second purification step through size exclusion chromatograph. Eluate fractions are analyzed by SDS-PAGE and Western blot.
Purity:	>95 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.
Sterility:	0.22 µm filtered
Endotoxin Level:	Protein is endotoxin-free.

Product Details

Grade:	Crystallography grade

Target Details

Target:	DMPK
Alternative Name:	DMPK (DMPK Products)
Background:	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:	70.6 kDa Including tag.
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 as well. As the protein has not been tested for functional studies yet we cannot offer a gurantee though.
Comment:	In cases in which it is highly likely that the recombinant protein with the default tag will be insoluble our protein lab may suggest a higher molecular weight tag (e.g. GST-tag) instead to increase solubility. We will discuss all possible options with you in detail to assure that you receive your protein of interest.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	100 mM NaCL, 20 mM Hepes, 10% glycerol. pH value is at the discretion of the manufacturer.
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	Unlimited (if stored properly)

Images

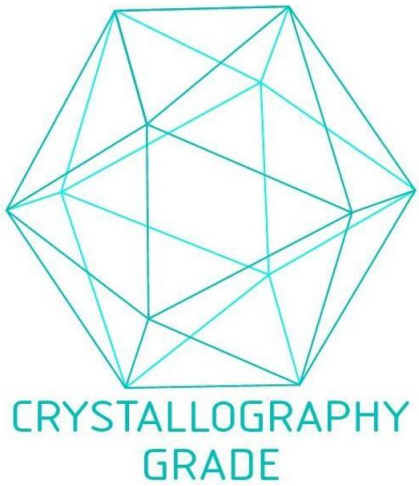

Image 1. „Crystallography Grade“ protein due to multi-step, protein-specific purification process