Datasheet for ABIN3093720

MARK2 Protein (AA 1-788) (His tag)

1 Image

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Overview

Quantity:	1 mg
Target:	MARK2
Protein Characteristics:	AA 1-788
Origin:	Human
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This MARK2 protein is labelled with His tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS), Crystallization (Crys)

Product Details

Sequence:	MSSARTPLPT LNERDTEQPT LGHLDSKPSS KSNMIRGRNS ATSADEQPHI GNYRLLKTIG KGNFAKVKLA RHILTGKEVA VKIIDKTQLN SSSLQKLFRE VRIMKVLNHP NIVKLFEVIE TEKTLYLVME YASGGEVFDY LVAHGRMKEK EARAKFRQIV SAVQYCHQKF IVHRDLKAEN LLLDADMNIK IADFGFSNEF TFGNKLDTFC GSPPYAAPEL FQGKKYDGPE VDVWSLGVIL YTLVSGSLPF DGQNLKELRE RVLRGKYRIP FYMSTDCENL LKKFLILNPS KRGTLEQIMK DRWMNVGHED DELKPYVEPL PDYKDPRRTE LMVSMGYTRE EIQDSLVGQR YNEVMATYLL LGYKSSELEG DTITLKPRPS ADLTNSSAPS PSHKVQRSVS ANPKQRRFSD QAAGPAIPTS NSYSKKTQSN NAENKRPEED RESGRKASST AKVPASPLPG LERKKTTPTP STNSVLSTST NRSRNSPLLE RASLGQASIQ NGKDSLTMPG SRASTASASA AVSAARPRQH QKSMSASVHP NKASGLPPTE SNCEVPRPST APQRVPVASP SAHNISSSGG APDRTNFPRG VSSRSTFHAG QLRQVRDQQN LPYGVTPASP SGHSQGRRGA SGSIFSKFTS KFVRRNLSFR FARRNLNEPE SKDRVETLRP HVVGSGGNDK EKEEFREAKP RSLRFTWSMK TTSSMEPNEM MREIRKVLDA

	NSCQSELHEK YMLLCMHGTP GHEDFVQWEM EVCKLPRLSL NGVRFKRISG TSMAFKNIAS KIANELKL **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 MARK2 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:	Two step purification of proteins expressed in baculovirus infected SF9 insect cells: 1. In a first purification step, the protein is purified from the cleared cell lysate using three different His-tag capture materials: high yield, EDTA resistant, or DTT resistant. 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:	>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:	MARK2
Alternative Name:	MARK2 (MARK2 Products)
Background:	Serine/threonine-protein kinase involved in cell polarity and microtubule dynamics regulation. Phosphorylates CRTC2/TORC2, DCX, HDAC7, KIF13B, MAP2, MAP4, MAPT/TAU, and RAB11FIP2. Plays a key role in cell polarity by phosphorylating the microtubule-associated proteins MAP2, MAP4 and MAPT/TAU at KXGS motifs, causing detachment from microtubules, and their disassembly. Regulates epithelial cell polarity by phosphorylating RAB11FIP2. Involved in the regulation of neuronal migration through its dual activities in regulating cellular polarity and microtubule dynamics, possibly by phosphorylating and regulating DCX. Regulates axogenesis by phosphorylating KIF13B, promoting interaction between KIF13B and 14-3-3 and inhibiting microtubule-dependent accumulation of KIF13B. Also required for neurite outgrowth and establishment of neuronal polarity. Regulates localization and activity of some histone deacetylases by mediating phosphorylation of HDAC7, promoting subsequent interaction between HDAC7 and 14-3-3 and export from the nucleus. Also acts as a positive regulator of the Wnt signaling pathway, probably by mediating phosphorylation of dishevelled proteins (DVL1, DVL2 and/or DVL3). Modulates the developmental decision to build a columnar versus a hepatic epithelial cell apparently by promoting a switch from a direct to a transcytotic mode of apical protein delivery. Essential for the asymmetric development of membrane domains of polarized epithelial cells. {ECO:0000269|PubMed:11433294, ECO:0000269|PubMed:12429843, ECO:0000269|PubMed:14976552, ECO:0000269|PubMed:15158914, ECO:0000269|PubMed:15324659, ECO:0000269|PubMed:15365179, ECO:0000269|PubMed:16775013, ECO:0000269|PubMed:16980613, ECO:0000269|PubMed:18626018, ECO:0000269|PubMed:20194617}.
Molecular Weight:	88.9 kDa Including tag.
UniProt:	Q7KZI7
Pathways:	SARS-CoV-2 Protein Interactome, The Global Phosphorylation Landscape of SARS-CoV-2 Infection

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 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