Datasheet for ABIN3093721

MARK4 Protein (AA 1-752) (Strep Tag)

1 Image

Go to Product page

Overview

Quantity:	1 mg
Target:	MARK4
Protein Characteristics:	AA 1-752
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This MARK4 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Sequence:	MSSRTVLAPG NDRNSDTHGT LGSGRSSDKG PSWSSRSLGA RCRNSIASCP EEQPHVGNYR LLRTIGKGNF AKVKLARHIL TGREVAIKII DKTQLNPSSL QKLFREVRIM KGLNHPNIVK LFEVIETEKT LYLVMEYASA GEVFDYLVSH GRMKEKEARA KFRQIVSAVH YCHQKNIVHR DLKAENLLLD AEANIKIADF GFSNEFTLGS KLDTFCGSPP YAAPELFQGK KYDGPEVDIW SLGVILYTLV SGSLPFDGHN LKELRERVLR GKYRVPFYMS TDCESILRRF LVLNPAKRCT LEQIMKDKWI NIGYEGEELK PYTEPEEDFG DTKRIEVMVG MGYTREEIKE SLTSQKYNEV TATYLLLGRK TEEGGDRGAP GLALARVRAP SDTTNGTSSS KGTSHSKGQR SSSSTYHRQR RHSDFCGPSP APLHPKRSPT STGEAELKEE RLPGRKASCS TAGSGSRGLP PSSPMVSSAH NPNKAEIPER RKDSTSTPNN LPPSMMTRRN TYVCTERPGA ERPSLLPNGK ENSSGTPRVP PASPSSHSLA PPSGERSRLA RGSTIRSTFH GGQVRDRRAG GGGGGGVQNG PPASPTLAHE AAPLPAGRPR PTTNLFTKLT SKLTRRVADE PERIGGPEVT SCHLPWDQTE TAPRLLRFPW SVKLTSSRPP EALMAALRQA TAAARCRCRQ PQPFLLACLH GGAGGPEPLS HFEVEVCQLP

	RPGLRGVLFR RVAGTALAFR TLVTRISNDL EL **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

Product Details

	(ALiCE®): 1. In a first purification step, the protein is purified from the cleared cell lysate using StrepTag 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:	MARK4
Alternative Name:	MARK4 (MARK4 Products)
Background:	MAP/microtubule affinity-regulating kinase 4 (EC 2.7.11.1) (MAP/microtubule affinity-regulating kinase-like 1),FUNCTION: Serine/threonine-protein kinase (PubMed:15009667, PubMed:14594945, PubMed:23666762, PubMed:23184942). Phosphorylates the microtubule-associated protein MAPT/TAU (PubMed:14594945, PubMed:23666762). Also phosphorylates the microtubule-associated proteins MAP2 and MAP4 (PubMed:14594945). Involved in regulation of the microtubule network, causing reorganization of microtubules into bundles (PubMed:14594945, PubMed:25123532). Required for the initiation of axoneme extension during cilium assembly (PubMed:23400999). Regulates the centrosomal location of ODF2 and phosphorylates ODF2 in vitro (PubMed:23400999). Plays a role in cell cycle progression, specifically in the G1/S checkpoint (PubMed:25123532). Reduces neuronal cell survival (PubMed:15009667). Plays a role in energy homeostasis by regulating satiety and metabolic rate (By similarity). Promotes adipogenesis by activating JNK1 and inhibiting the p38MAPK pathway, and triggers apoptosis by activating the JNK1 pathway (By similarity). Phosphorylates mTORC1 complex member RPTOR and acts as a negative regulator of the mTORC1 complex, probably due to disruption of the interaction between phosphorylated RPTOR and the RRAGA/RRAGC heterodimer which is required for mTORC1 activation (PubMed:23184942). Involved in NLRP3 positioning along microtubules by mediating NLRP3 recruitment to microtubule organizing center (MTOC) upon inflammasome activation (PubMed:28656979). {ECO:0000250|UniProtKB:Q8CIP4, ECO:0000269|PubMed:14594945, ECO:0000269|PubMed:15009667, ECO:0000269|PubMed:23184942, ECO:0000269|PubMed:23400999, ECO:0000269|PubMed:23666762,

Target Details

	ECO:0000269|PubMed:25123532, ECO:0000269|PubMed:28656979}.
Molecular Weight:	82.5 kDa
UniProt:	Q96L34

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. 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