Datasheet for ABIN3093841

MICAL1 Protein (AA 1-1067) (Strep Tag)

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Overview

Quantity:	1 mg
Target:	MICAL1
Protein Characteristics:	AA 1-1067
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This MICAL1 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Sequence:	MASPTSTNPA HAHFESFLQA QLCQDVLSSF QELCGALGLE PGGGLPQYHK IKDQLNYWSA KSLWTKLDKR AGQPVYQQGR ACTSTKCLVV GAGPCGLRVA VELALLGARV VLVEKRTKFS RHNVLHLWPF TIHDLRALGA KKFYGRFCTG TLDHISIRQL QLLLLKVALL LGVEIHWGVT FTGLQPPPRK GSGWRAQLQP NPPAQLANYE FDVLISAAGG KFVPEGFKVR EMRGKLAIGI TANFVNGRTV EETQVPEISG VARIYNQSFF QSLLKATGID LENIVYYKDD THYFVMTAKK QCLLRLGVLR QDWPDTNRLL GSANVVPEAL QRFTRAAADF ATHGKLGKLE FAQDAHGQPD VSAFDFTSMM RAESSARVQE KHGARLLLGL VGDCLVEPFW PLGTGVARGF LAAFDAAWMV KRWAEGAESL EVLAERESLY QLLSQTSPEN MHRNVAQYGL DPATRYPNLN LRAVTPNQVR DLYDVLAKEP VQRNNDKTDT GMPATGSAGT QEELLRWCQE QTAGYPGVHV SDLSSSWADG LALCALVYRL QPGLLEPSEL QGLGALEATA WALKVAENEL GITPVVSAQA VVAGSDPLGL IAYLSHFHSA FKSMAHSPGP VSQASPGTSS AVLFLSKLQR TLQRSRAKEN AEDAGGKKLR LEMEAETPST EVPPDPEPGV PLTPPSQHQE AGAGDLCALC GEHLYVLERL CVNGHFFHRS

CFRCHTCEAT LWPGGYEQHP GDGHFYCLQH LPQTDHKAEG SDRGPESPEL PTPSENSMPP GLSTPTASQE GAGPVPDPSQ PTRRQIRLSS PERQRLSSLN LTPDPEMEPP PKPPRSCSAL ARHALESSFV GWGLPVQSPQ ALVAMEKEEK ESPFSSEEEE EDVPLDSDVE QALQTFAKTS GTMNNYPTWR RTLLRRAKEE EMKRFCKAQT IQRRLNEIEA ALRELEAEGV KLELALRRQS SSPEQQKKLW VGQLLQLVDK KNSLVAEEAE LMITVQELNL EEKQWQLDQE LRGYMNREEN LKTAADRQAE DQVLRKLVDL VNQRDALIRF QEERRLSELA LGTGAQG

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.

Product Details

- 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 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)

Target Details

Target:	MICAL1
Alternative Name:	MICAL1 (MICAL1 Products)
Background:	[F-actin]-monooxygenase MICAL1 (EC 1.14.13.225) (EC 1.6.3.1) (Molecule interacting with CasL protein 1) (MICAL-1) (NEDD9-interacting protein with calponin homology and LIM domains),FUNCTION: Monooxygenase that promotes depolymerization of F-actin by mediating oxidation of specific methionine residues on actin to form methionine-sulfoxide, resulting in actin filament disassembly and preventing repolymerization (PubMed:29343822). In the absence of actin, it also functions as a NADPH oxidase producing H(2)O(2) (PubMed:21864500, PubMed:26845023, PubMed:29343822). Acts as a cytoskeletal regulator that connects NEDD9 to intermediate filaments. Also acts as a negative regulator of apoptosis via its interaction with STK38 and STK38L, acts by antagonizing STK38 and STK38L activation by MST1/STK4. Involved in regulation of lamina-specific connectivity in the nervous system such as the development of lamina-restricted hippocampal connections. Through redox regulation of the actin cytoskeleton controls the intracellular distribution of secretory vesicles containing L1/neurofascin/NgCAM family proteins in neurons, thereby regulating their cell surface levels (By similarity). May act as Rab effector protein and play a role in vesicle trafficking. Promotes endosomal tubule extension by associating with RAB8 (RAB8A or RAB8B), RAB10 and GRAF (GRAF1/ARHGAP26 or GRAF2/ARHGAP10) on the endosomal membrane which may connect GRAFs to Rabs, thereby participating in neosynthesized Rab8-Rab10-Rab11-dependent protein

Target Details

	export (PubMed:32344433). {ECO:0000250|UniProtKB:Q8VDP3, ECO:0000269|PubMed:18305261, ECO:0000269|PubMed:21864500, ECO:0000269|PubMed:26845023, ECO:0000269|PubMed:28230050, ECO:0000269|PubMed:29343822, ECO:0000269|PubMed:32344433, ECO:0000305|PubMed:27552051}.
Molecular Weight:	117.9 kDa
UniProt:	Q8TDZ2

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)

