

Datasheet for ABIN3090415

CAMSAP3 Protein (AA 1-1249) (Strep Tag)



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1 Image

Overview

Quantity:	1 mg
Target:	CAMSAP3
Protein Characteristics:	AA 1-1249
Origin:	Human
Source:	Tobacco (<i>Nicotiana tabacum</i>)
Protein Type:	Recombinant
Purification tag / Conjugate:	This CAMSAP3 protein is labelled with Strep Tag.
Application:	ELISA, SDS-PAGE (SDS), Western Blotting (WB)

Product Details

Sequence: MVEAAPPGPG PLRRTFLVPE IKSLDQYDFS RAKAAASLAW VLRAAFGGAE HVPPELWEPF
YTDQYAQEHV KPPVTRLLLS AELYCRAWRQ ALPQLETPPN PSALLALLAR RGTVPALPER
PVREADLRHQ PILMGAHLAV IDALMAAFAP EWTKTLPGPL ALTSLEHKLL FWVDTTVRRL
QEKTEQEAQ RASPAAPADG AAPAQPSIRY RKDRVVARA PCFPTVTSLQ DLASGAALAA
TIHCYCPQLL RLEEVCLKDP MSVADSLYNL QLVQDFCASR LPRGCPLSLE DLLYVPPPLK
VNLVVMLAEL FMCFEVLKPD FVQVKDLPDG HAASPRGTEA SPPQNNSSGSS SPVFTFRHPL
LSSGGPQSPL RGSTGSLKSS PSMHMEALG KAWNRQLSRP LSQAVSFSTP FGLDSDVDVV
MGDPVLLRSV SDSLGPFRP APARTPTQPP PEPGDLPTIE EALQIIHSAE PRLLPDGAAD
GSFYLHSPG PSKPSLASPY LPEGTSKPLS DRPTKAPVYM PHPETPSKPS PCLVGEASKP
PAPSEGSPKA VASSPAATNS EVKMTSFAER KKQLVKAEE AGAGSPTSTP APPEALSSEM
SELSARLEEK RRAIEAQKRR IEAIFAKHRQ RLGKSAFLQV QPREASGEAE AEAEEDSGP
VPGGERPAGE GQGEPTSRPK AVTFSPDLGP VPHEGLGEYN RAVSKLSAAL SSLQRDMQRL

TDQQQRLLAP PEAPGSAPPP AAWVIPGPTT GPKAASPSA RRVPATRRSP GPGPSQSPRS
PKHTRPAELR LAPLTRVLT PHDVDSLPHL RKFSPSQVPV QTRSSILLAE ETPPEEPAAR
PGLIEIPLGS LADPAAEDEG DGSPAGAEDS LEEEASSEGE PRVGLGFFYK DEDKPEDEMA
QKRASLLERQ QRRAEERARR KQWQEVEKEQ RREEAARLAQ EEAPGPAPLV SAVPMATPAP
AARAPAEDEV GPRKGDFTTRQ EYERRAQLKL MDDLKVLRP RAAGSGGPGR GGRRATRPRS
GCCDDAALAR SPARGLLGSR LSKIYSQSTL SLSTVANEAH NNLGVKRPTS RAPSPSGLMS
PSRLPGSRER DWENGSNASS PASVPEYTG RLYKEPSAKS NKFIHNALS HCCLAGKVNE
PQKNRILEEI EKSKANHFLI LFRDSSCQFR ALYTLSGETE ELSRLAGYGP RTVTPAMVEG
IYKYNDRKR FTQIPAKTMS MSVDAFTIQG HLWQGKKPTT PKKGGGTPK

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!

Product Details

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 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:

CAMSAP3

Alternative Name:

CAMSAP3 ([CAMSAP3 Products](#))

Background:

Calmodulin-regulated spectrin-associated protein 3 (Protein Nezha),FUNCTION: Key microtubule-organizing protein that specifically binds the minus-end of non-centrosomal microtubules and regulates their dynamics and organization (PubMed:19041755, PubMed:23169647). Specifically recognizes growing microtubule minus-ends and autonomously decorates and stabilizes microtubule lattice formed by microtubule minus-end polymerization (PubMed:24486153). Acts on free microtubule minus-ends that are not capped by microtubule-nucleating proteins or other factors and protects microtubule minus-ends from depolymerization (PubMed:24486153). In addition, it also reduces the velocity of microtubule polymerization (PubMed:24486153). Required for the biogenesis and the maintenance of zonula adherens by anchoring the minus-end of microtubules to zonula adherens and by recruiting the kinesin KIFC3 to those junctional sites (PubMed:19041755). Required for orienting the apical-to-basal polarity of microtubules in epithelial cells: acts by tethering non-centrosomal microtubules to the apical cortex, leading to their longitudinal orientation

Target Details

(PubMed:27802168, PubMed:26715742). Plays a key role in early embryos, which lack centrosomes: accumulates at the microtubule bridges that connect pairs of cells and enables the formation of a non-centrosomal microtubule-organizing center that directs intracellular transport in the early embryo (By similarity). Couples non-centrosomal microtubules with actin: interaction with MACF1 at the minus ends of non-centrosomal microtubules, tethers the microtubules to actin filaments, regulating focal adhesion size and cell migration (PubMed:27693509). Plays a key role in the generation of non-centrosomal microtubules by accumulating in the pericentrosomal region and cooperating with KATNA1 to release non-centrosomal microtubules from the centrosome (PubMed:28386021). Through the microtubule cytoskeleton, also regulates the organization of cellular organelles including the Golgi and the early endosomes (PubMed:28089391). Through interaction with AKAP9, involved in translocation of Golgi vesicles in epithelial cells, where microtubules are mainly non-centrosomal (PubMed:28089391). Plays an important role in motile cilia function by facilitating proper orientation of basal bodies and formation of central microtubule pairs in motile cilia (By similarity). {ECO:0000250|UniProtKB:Q80VC9, ECO:0000269|PubMed:19041755, ECO:0000269|PubMed:23169647, ECO:0000269|PubMed:24486153, ECO:0000269|PubMed:26715742, ECO:0000269|PubMed:27693509, ECO:0000269|PubMed:27802168, ECO:0000269|PubMed:28089391, ECO:0000269|PubMed:28386021}.

Molecular Weight: 134.8 kDa

UniProt: [Q9P1Y5](#)

Pathways: [Cell-Cell Junction Organization, Maintenance of Protein Location](#)

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.

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Application Details

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)

Images



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