

Datasheet for ABIN3096298 VPS4A Protein (AA 1-437) (Strep Tag)



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Overview

Quantity:	1 mg
Target:	VPS4A
Protein Characteristics:	AA 1-437
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This VPS4A protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Sequence: MTTSTLQKAI DLVTKATEED KAKNYEEALR LYQHAVEYFL HAIKYEAHSD KAKESIRAKC
VQYLDRAEKL KDYLRSKEKH GKPPVKENQS EGKGSDDSE GDNPEKKKLQ EQLMGAVVME
KPNIRWNDVA GLEGAKEALK EAVILPIKFP HLFTGKRTPW RGILLFGPPG TGKSYLAKAV
ATEANNSTFF SVSSDLMSK WLGESEKLVK NLFELARQHK PSIIFIDEVD SLCGSRNENE
SEAARRIKTE FLVQMQGVGN NNDGTLVLGA TNIPWVLSA IRRRFEKRIY IPLPEEAARA
QMFRHLHGST PHNLTDANIH ELARKTEGYS GADISIIVRD SLMQPVRKVQ SATHFKKVCG
PSRTNPSMMI DDLTPCSPG DPGAMEMTWM DVPGDKLLEP VVCMSDMLRS LATTRPTVNA
DDLKVKKFS EDFGQES

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 Exspasy'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.

Product Details

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:	VPS4A
Alternative Name:	VPS4A (VPS4A Products)
Background:	<p>Vacuolar protein sorting-associated protein 4A (EC 3.6.4.6) (Protein SKD2) (VPS4-1) (hVPS4),FUNCTION: Involved in late steps of the endosomal multivesicular bodies (MVB) pathway. Recognizes membrane-associated ESCRT-III assemblies and catalyzes their disassembly, possibly in combination with membrane fission. Redistributes the ESCRT-III components to the cytoplasm for further rounds of MVB sorting. MVBs contain intraluminal vesicles (ILVs) that are generated by invagination and scission from the limiting membrane of the endosome and mostly are delivered to lysosomes enabling degradation of membrane proteins, such as stimulated growth factor receptors, lysosomal enzymes and lipids. It is required for proper accomplishment of various processes including the regulation of endosome size, primary cilium organization, mitotic spindle organization, chromosome segregation, and nuclear envelope sealing and spindle disassembly during anaphase (PubMed:33186545). Involved in cytokinesis: retained at the midbody by ZFYVE19/ANCHR and CHMP4C until abscission checkpoint signaling is terminated at late cytokinesis. It is then released following dephosphorylation of CHMP4C, leading to abscission (PubMed:24814515). VPS4A/B are required for the exosomal release of SDCBP, CD63 and syndecan (PubMed:22660413). Critical for normal erythroblast cytokinesis and correct erythropoiesis (PubMed:33186543). {ECO:0000269 PubMed:11563910, ECO:0000269 PubMed:15075231, ECO:0000269 PubMed:22660413, ECO:0000269 PubMed:24814515, ECO:0000269 PubMed:33186543, ECO:0000269 PubMed:33186545}., FUNCTION: (Microbial infection) In conjunction with the ESCRT machinery also appears to function in topologically equivalent membrane fission events, such as the terminal stages of cytokinesis and enveloped virus budding (HIV-1 and other lentiviruses). {ECO:0000269 PubMed:11595185}.</p>
Molecular Weight:	48.9 kDa
UniProt:	Q9UN37
Pathways:	Microtubule Dynamics, CXCR4-mediated Signaling Events

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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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