Datasheet for ABIN3096113

TSC1 Protein (AA 1-1164) (Strep Tag)

Go to Product page

Overview

Quantity:	250 µg
Target:	TSC1
Protein Characteristics:	AA 1-1164
Origin:	Human
Source:	Cell-free protein synthesis (CFPS)
Protein Type:	Recombinant
Purification tag / Conjugate:	This TSC1 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Brand:	AliCE®
Sequence:	MAQQANVGEL LAMLDSPMLG VRDDVTAVFK ENLNSDRGPM LVNTLVDYYL ETSSQPALHI LTTLQEPHDK HLLDRINEYV GKAATRLSIL SLLGHVIRLQ PSWKHKLSQA PLLPSLLKCL KMDTDVVVLT TGVLVLITML PMIPQSGKQH LLDFFDIFGR LSSWCLKKPG HVAEVYLVHL HASVYALFHR LYGMYPCNFV SFLRSHYSMK ENLETFEEVV KPMMEHVRIH PELVTGSKDH ELDPRRWKRL ETHDVVIECA KISLDPTEAS YEDGYSVSHQ ISARFPHRSA DVTTSPYADT QNSYGCATST PYSTSRLMLL NMPGQLPQTL SSPSTRLITE PPQATLWSPS MVCGMTTPPT SPGNVPPDLS HPYSKVFGTT AGGKGTPLGT PATSPPPAPL CHSDDYVHIS LPQATVTPPR KEERMDSARP CLHRQHHLLN DRGSEEPPGS KGSVTLSDLP GFLGDLASEE DSIEKDKEEA AISRELSEIT TAEAEPVVPR GGFDSPFYRD SLPGSQRKTH SAASSSQGAS VNPEPLHSSL DKLGPDTPKQ AFTPIDLPCG SADESPAGDR ECQTSLETSI FTPSPCKIPP PTRVGFGSGQ PPPYDHLFEV ALPKTAHHFV IRKTEELLKK AKGNTEEDGV PSTSPMEVLD RLIQQGADAH

SKELNKLPLP SKSVDWTHFG GSPPSDEIRT LRDQLLLLHN QLLYERFKRQ QHALRNRRLL RKVIKAAALE EHNAAMKDQL KLQEKDIQMW KVSLQKEQAR YNQLQEQRDT MVTKLHSQIR QLQHDREEFY NQSQELQTKL EDCRNMIAEL RIELKKANNK VCHTELLLSQ VSQKLSNSES VQQQMEFLNR QLLVLGEVNE LYLEQLQNKH SDTTKEVEMM KAAYRKELEK NRSHVLQQTQ RLDTSQKRIL ELESHLAKKD HLLLEQKKYL EDVKLQARGQ LQAAESRYEA QKRITQVFEL EILDLYGRLE KDGLLKKLEE EKAEAAEAAE ERLDCCNDGC SDSMVGHNEE ASGHNGETKT PRPSSARGSS GSRGGGGSSS SSSELSTPEK PPHQRAGPFS SRWETTMGEA SASIPTTVGS LPSSKSFLGM KARELFRNKS ESQCDEDGMT SSLSESLKTE LGKDLGVEAK IPLNLDGPHP SPPTPDSVGQ LHIMDYNETH HEHS

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 in one-step affinity chromatography
- 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 try to ensure that you receive soluble 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 against its specific reference buffer. • We use the Expasy's ProtParam tool to determine the absorption coefficient of each protein.
Purification:	One-step Strep-tag purification of proteins expressed in Almost Living Cell-Free Expression System (AliCE®).
Purity:	> 70-80 % as determined by SDS PAGE, Western Blot and analytical SEC (HPLC).
Grade:	custom-made

Target Details

Target:	TSC1
Alternative Name:	TSC1 (TSC1 Products)
Background:	Hamartin (Tuberous sclerosis 1 protein),FUNCTION: Non-catalytic component of the TSC-TBC complex, a multiprotein complex that acts as a negative regulator of the canonical mTORC1 complex, an evolutionarily conserved central nutrient sensor that stimulates anabolic reactions and macromolecule biosynthesis to promote cellular biomass generation and growth (PubMed:12172553, PubMed:12906785, PubMed:12271141, PubMed:28215400, PubMed:15340059, PubMed:24529379). The TSC-TBC complex acts as a GTPase-activating protein (GAP) for the small GTPase RHEB, a direct activator of the protein kinase activity of mTORC1 (PubMed:12906785, PubMed:15340059, PubMed:24529379). In absence of nutrients, the TSC-TBC complex inhibits mTORC1, thereby preventing phosphorylation of ribosomal protein S6 kinase (RPS6KB1 and RPS6KB2) and EIF4EBP1 (4E-BP1) by the mTORC1 signaling (PubMed:12271141, PubMed:24529379, PubMed:28215400). The TSC-TBC complex is inactivated in response to nutrients, relieving inhibition of mTORC1 (PubMed:12172553, PubMed:24529379). Within the TSC-TBC complex, TSC1 stabilizes TSC2 and prevents TSC2 self-aggregation (PubMed:10585443, PubMed:28215400). Acts as a tumor suppressor (PubMed:9242607). Involved in microtubule-mediated protein transport via its ability to regulate mTORC1 signaling (By similarity). Also acts as a co-chaperone for HSP90AA1 facilitating HSP90AA1 chaperoning of protein clients such as kinases, TSC2 and glucocorticoid receptor NR3C1 (PubMed:29127155). Increases ATP binding to HSP90AA1 and inhibits HSP90AA1 ATPase activity (PubMed:29127155). Competes with the activating co-chaperone AHSA1 for binding to HSP90AA1, thereby providing a reciprocal regulatory mechanism for chaperoning of client proteins (PubMed:29127155). Recruits TSC2 to HSP90AA1 and stabilizes TSC2 by

Target Details

	preventing the interaction between TSC2 and ubiquitin ligase HERC1 (PubMed:16464865, PubMed:29127155). {ECO:0000250|UniProtKB:Q9Z136, ECO:0000269|PubMed:10585443, ECO:0000269|PubMed:12172553, ECO:0000269|PubMed:12271141, ECO:0000269|PubMed:12906785, ECO:0000269|PubMed:15340059, ECO:0000269|PubMed:16464865, ECO:0000269|PubMed:24529379, ECO:0000269|PubMed:28215400, ECO:0000269|PubMed:29127155, ECO:0000269|PubMed:9242607}.
Molecular Weight:	129.8 kDa
UniProt:	Q92574
Pathways:	RTK Signaling, AMPK Signaling, Regulation of Cell Size, Tube Formation

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. Standard Storage Buffer: PBS pH 7.4, 10 % Glycerol **Might differ depending on protein.**
Handling Advice:	Avoid repeated freeze-thaw cycles.

Handling

Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	12 months