

Datasheet for ABIN7565018
TSC1 Protein (AA 1-1161) (His tag)



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Overview

Quantity:	1 mg
Target:	TSC1
Protein Characteristics:	AA 1-1161
Origin:	Mouse
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This TSC1 protein is labelled with His tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Purpose:	Custom-made recombinat Tsc1 Protein expressed in mammalien cells.
Sequence:	MAQLANIGEL LSMLDSSTLG VRDDVTAIFK ESLNSERGPM LVNTLVDYYL ETNSQPVLHI LTTLQEPHDK HLLDKINEYV GKAATRLSIL SLLGHVVRLQ PSWKHKLSQA PLLPSLLKCL KMDTDVVVLT TGVLVLITML PMIPQSGKQH LLDFFDIFGR LSSWCLKKPG HVTEVYLVHL HASVYALFHR LYGMYP CNFV SFLRSHYSMK ENVETFEVV KPMMEHVRIH PELVTGSKDH ELDPRRWKTL ETHDVVIECA KISLDPTEAS YEDGYSVSHQ LSACFPYRSA DVTTSPYVDT QNSYGGSTST PSSSRLMLF SPPGQLPQSL SSPSTRLLPE PLQASLWSPS AVCGMTTPPT SPGNVPADLS HPYSKAFGTT AGGKGTSPGT PATSPPPAPP CPQDDCVHGS AAQASATAPR KEERADSSRP YLHRQSNDRG LEDPPGSKGS VTLRNLPDFL GDLASEEDSI EKDKEEAAIS KELSEITTAE ADPVVPRGGF DSPFYRDSLS GSQRKTHSAA SGTQGSSVNP EPLHSSLDKH GPDTPKQAFD PIDPPSGSAD VSPAGDRDRQ TSLETSILTP SPCKIPPQRG VSGSGQLPP YDHLFEVALP KTACHFVSKK TEELLKKVKG NPEEDCVPST SPMEVLDRLI EQGAGAHSKE

Product Details

LSRLSLPSKS VDWTHFGGSP PSDELRTLRLD QLLLLLHNQLL YERFKRQQHA LRNRLLLRKV
IRAAALEEHN AAMKDQLKLQ EKDIQMWKVS LQKEQARYSQ LQEQRDTMVT QLHSQIRQLQ
HDREEFYNS QELQTKLEDC RNMI AELRVE LKKANNKVCH TELLSSQVSQ KLSNSESQQ
QMEFLNRQLL VLGEVNELYL EQLQSKHPDT TKEVEMMKA YRKELEKNRS HLLQQNQRLD
ASQRRVLELE SLLAKKDHL LEQKKYLEDV KSQASGQLLA AESRYEAQRK ITRVLELEIL
DLYGRLEKDG RLRKLEEDRA EAAEAAEERL DCCSDGCTDS LVGHNEEASG HNGETRTRSRP
GGTRASCGR VTGGSSSSSS ELSTPEKPPS QRFSSRWEPA LGEPSSSIPT TVGSLPSSKS
FLGMKARELF RNKSESQCDE DSVTMSSSSL SETLKTGK DSGTENKTS SLDAPHPSSP
NSDNVQLHI MDYNETHPEH S **Sequence without tag. The proposed Purification-Tag is based on experiences 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 to order protein - from design to production - by highly experienced protein experts.
- Protein expressed in mammalian cells and purified in one-step affinity chromatography
- The optimized expression system ensures reliability for intracellular, secreted and transmembrane proteins.
- 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.

If you are not interested in a full length protein, please contact us for individual protein fragments.

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.

Purity:

> 90 % as determined by Bis-Tris Page, Western Blot

Grade:

custom-made

Target Details

Target:

TSC1

Alternative Name:

Tsc1 ([TSC1 Products](#))

Background:

Hamartin (Tuberous sclerosis 1 protein homolog),FUNCTION: Non-catalytic component of the TSC-TBC complex, a multiprotein complex that acts as a negative regulator of the canonical

Target Details

mTORC1 complex, an evolutionarily conserved central nutrient sensor that stimulates anabolic reactions and macromolecule biosynthesis to promote cellular biomass generation and growth (PubMed:12820960). 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:12820960). 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:12820960). The TSC-TBC complex is inactivated in response to nutrients, relieving inhibition of mTORC1 (By similarity). Within the TSC-TBC complex, TSC1 stabilizes TSC2 and prevents TSC2 self-aggregation (By similarity). Involved in microtubule-mediated protein transport via its ability to regulate mTORC1 signaling (PubMed:16707451). Also acts as a co-chaperone for HSP90AA1 facilitating HSP90AA1 chaperoning of protein clients such as kinases, TSC2 and glucocorticoid receptor NR3C1 (By similarity). 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 (By similarity). Recruits TSC2 to HSP90AA1 and stabilizes TSC2 by preventing the interaction between TSC2 and ubiquitin ligase HERC1 (By similarity).
{ECO:0000250|UniProtKB:Q92574, ECO:0000269|PubMed:12820960, ECO:0000269|PubMed:16707451, ECO:0000269|PubMed:29127155}.

Molecular Weight: 128.7 kDa

UniProt: [Q9EP53](#)

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.

Restrictions: For Research Use only

Handling

Format: Liquid

Buffer: The buffer composition is at the discretion of the manufacturer.

Handling Advice: Avoid repeated freeze-thaw cycles.

Handling

Storage: -80 °C

Storage Comment: Store at -80°C.

Expiry Date: 12 months