Datasheet for ABIN7555879

TSC1 Protein (AA 1-1164) (His tag)

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Overview

Quantity:	1 mg
Target:	TSC1
Protein Characteristics:	AA 1-1164
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This TSC1 protein is labelled with His tag.

Product Details

Purpose:	Custom-made recombinant TSC1 Protein expressed in mammalian cells.
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

Product Details

	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 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.**
Specificity:	If you are looking for a specific domain and are interested in a partial protein or a different isoform, please contact us regarding an individual offer.
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, anti-tag ELISA, 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

Target Details

	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 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:	We expect the protein to work for functional studies. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.

Application Details

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