Datasheet for ABIN3095093

Raptor Protein (AA 1-1335) (Strep Tag)

Go to Product page

Overview

Quantity:	1 mg
Target:	Raptor (RPTOR)
Protein Characteristics:	AA 1-1335
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This Raptor protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Sequence:	MESEMLQSPL LGLGEEDEAD LTDWNLPLAF MKKRHCEKIE GSKSLAQSWR MKDRMKTVSV ALVLCLNVGV DPPDVVKTTP CARLECWIDP LSMGPQKALE TIGANLQKQY ENWQPRARYK QSLDPTVDEV KKLCTSLRRN AKEERVLFHY NGHGVPRPTV NGEVWVFNKN YTQYIPLSIY DLQTWMGSPS IFVYDCSNAG LIVKSFKQFA LQREQELEVA AINPNHPLAQ MPLPPSMKNC IQLAACEATE LLPMIPDLPA DLFTSCLTTP IKIALRWFCM QKCVSLVPGV TLDLIEKIPG RLNDRRTPLG ELNWIFTAIT DTIAWNVLPR DLFQKLFRQD LLVASLFRNF LLAERIMRSY NCTPVSSPRL PPTYMHAMWQ AWDLAVDICL SQLPTIIEEG TAFRHSPFFA EQLTAFQVWL TMGVENRNPP EQLPIVLQVL LSQVHRLRAL DLLGRFLDLG PWAVSLALSV GIFPYVLKLL QSSARELRPL LVFIWAKILA VDSSCQADLV KDNGHKYFLS VLADPYMPAE HRTMTAFILA VIVNSYHTGQ EACLQGNLIA ICLEQLNDPH PLLRQWVAIC LGRIWQNFDS ARWCGVRDSA HEKLYSLLSD PIPEVRCAAV FALGTFVGNS AERTDHSTTI DHNVAMMLAQ LVSDGSPMVR KELVVALSHL VVQYESNFCT VALQFIEEEK NYALPSPATT EGGSLTPVRD SPCTPRLRSV

SSYGNIRAVA TARSLNKSLQ NLSLTEESGG AVAFSPGNLS TSSSASSTLG SPENEEHILS FETIDKMRRA SSYSSLNSLI GVSFNSVYTQ IWRVLLHLAA DPYPEVSDVA MKVLNSIAYK ATVNARPQRV LDTSSLTQSA PASPTNKGVH IHQAGGSPPA SSTSSSSLTN DVAKQPVSRD LPSGRPGTTG PAGAQYTPHS HQFPRTRKMF DKGPEQTADD ADDAAGHKSF ISATVQTGFC DWSARYFAQP VMKIPEEHDL ESQIRKEREW RFLRNSRVRR QAQQVIQKGI TRLDDQIFLN RNPGVPSVVK FHPFTPCIAV ADKDSICFWD WEKGEKLDYF HNGNPRYTRV TAMEYLNGQD CSLLLTATDD GAIRVWKNFA DLEKNPEMVT AWQGLSDMLP TTRGAGMVVD WEQETGLLMS SGDVRIVRIW DTDREMKVQD IPTGADSCVT SLSCDSHRSL IVAGLGDGSI RVYDRRMALS ECRVMTYREH TAWVVKASLQ KRPDGHIVSV SVNGDVRIFD PRMPESVNVL QIVKGLTALD IHPQADLIAC GSVNQFTAIY NSSGELINNI KYYDGFMGQR VGAISCLAFH PHWPHLAVGS NDYYISVYSV EKRVR

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

Product Details

	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 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)

Target Details

Target:	Raptor (RPTOR)
Alternative Name:	RPTOR (RPTOR Products)
Background:	Regulatory-associated protein of mTOR (Raptor) (p150 target of rapamycin (TOR)-scaffold protein),FUNCTION: Component of the mechanistic target of rapamycin complex 1 (mTORC1), an evolutionarily conserved central nutrient sensor that stimulates anabolic reactions and macromolecule biosynthesis to promote cellular biomass generation and growth (PubMed:12150925, PubMed:12150926, PubMed:12747827, PubMed:24403073, PubMed:26588989, PubMed:32561715, PubMed:37541260). In response to nutrients, growth factors or amino acids, mTORC1 is recruited to the lysosome membrane and promotes protein, lipid and nucleotide synthesis by phosphorylating several substrates, such as ribosomal protein S6 kinase (RPS6KB1 and RPS6KB2) and EIF4EBP1 (4E-BP1) (PubMed:12150925, PubMed:12150926, PubMed:12747827, PubMed:24403073, PubMed:26588989, PubMed:37541260). In the same time, it inhibits catabolic pathways by phosphorylating the autophagy initiation components ULK1 and ATG13, as well as transcription factor TFEB, a

Target Details

	master regulators of lysosomal biogenesis and autophagy (PubMed:12150925, PubMed:12150926, PubMed:12747827, PubMed:24403073, PubMed:32561715, PubMed:37541260). The mTORC1 complex is inhibited in response to starvation and amino acid depletion (PubMed:12150925, PubMed:12150926, PubMed:12747827, PubMed:24403073, PubMed:37541260). Within the mTORC1 complex, RPTOR acts both as a molecular adapter, which (1) mediates recruitment of mTORC1 to lysosomal membranes via interaction with small GTPases Rag (RagA/RRAGA, RagB/RRAGB, RagC/RRAGC and/or RagD/RRAGD), and a (2) substrate-specific adapter, which promotes substrate specificity by binding to TOS motif-containing proteins and direct them towards the active site of the MTOR kinase domain for phosphorylation (PubMed:12747827, PubMed:24403073, PubMed:26588989, PubMed:37541260). mTORC1 complex regulates many cellular processes, such as odontoblast and osteoclast differentiation or neuronal transmission (By similarity). mTORC1 complex in excitatory neuronal transmission is required for the prosocial behavior induced by the psychoactive substance lysergic acid diethylamide (LSD) (By similarity). {ECO:0000250|UniProtKB:Q8K4Q0, ECO:0000269|PubMed:12150925, ECO:0000269|PubMed:12150926, ECO:0000269|PubMed:12747827, ECO:0000269|PubMed:24403073, ECO:0000269|PubMed:26588989, ECO:0000269|PubMed:32561715, ECO:0000269|PubMed:37541260}.
Molecular Weight:	149.0 kDa
UniProt:	Q8N122
Pathways:	PI3K-Akt Signaling, RTK Signaling, AMPK Signaling, Regulation of Muscle Cell Differentiation, Regulation of Cell Size, Skeletal Muscle Fiber Development, Autophagy, BCR Signaling, Warburg Effect

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

Application Details

	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. 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)

