

Datasheet for ABIN3094590

PHACTR4 Protein (AA 1-702) (Strep Tag)[Go to Product page](#)**1** Image

Overview

Quantity:	1 mg
Target:	PHACTR4
Protein Characteristics:	AA 1-702
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This PHACTR4 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Sequence:	MEDPFEEADQ PTTEPGMVL D SVEAGDTTP TKRKS FSGF GKIFKPWKWR KKKSSDKFKE TSEVLERKIS MRKPREELVK RGVLLDPEQ GGEDPGKPSD AMLKNGHTTP IGNARSSSPV QVEEEPURLA SLRKAIPED LKKRLGSTGS QPNSEAESVP ENVKPPLLP PKRPLSSSHE ASEGQAKDAT SSGGTARFII STSITTAPAA TTAATSLAKT VNLSVTPSPA PRTLPAAPAS TNTTATPSLT HMVPAKQPPI PPPKPAHRNS NPVIAELSQA INSGTLLSKP SPPLPPKRG I PSTSVPTLES AAAITTKTPS DEREKSTCSM GSELLPMISP RSPSPPLPTH IPPEPRTTP FPAKTFQVVP EIEFPPSLDL HQEIPQEDQ KKEVPKRILD QNFGEPHIPS RLPPLPLHIR IQQALTSPLP MTPILEGSHR AHSLLFENS D SFSEDSSTLG RTRSLPITIE MLKVPDDEEE EEQTC PSTFS EEMTPTSVIP KLPQCLREEE EKESDSDSEG PIQYRDEEDE DESYQSALAN KVVRKDTLAM KLNHRPSEPE LNLNSWPCKS KEEWNEIRHQ IGNTLIRRLS QRPTPEELEQ RNILQPKNEA DRQAEKREIK RRLTRKLSQR PTVAELLARK ILRFNEYVEV TDAQDYDRRA DKPWT KLTPA DKAAIRKELN EFKSSEMEVH EESKHFTTRYH RP
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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 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®):

Product Details

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)

Grade: Crystallography grade

Target Details

Target: PHACTR4

Alternative Name: PHACTR4 ([PHACTR4 Products](#))

Background: Phosphatase and actin regulator 4,FUNCTION: Regulator of protein phosphatase 1 (PP1) required for neural tube and optic fissure closure, and enteric neural crest cell (ENCCs) migration during development. Acts as an activator of PP1 by interacting with PPP1CA and preventing phosphorylation of PPP1CA at 'Thr-320'. During neural tube closure, localizes to the ventral neural tube and activates PP1, leading to down-regulate cell proliferation within cranial neural tissue and the neural retina. Also acts as a regulator of migration of enteric neural crest cells (ENCCs) by activating PP1, leading to dephosphorylation and subsequent activation of cofilin (COF1 or COF2) and repression of the integrin signaling through the RHO/ROCK pathway (By similarity). {ECO:0000250}.

Molecular Weight: 78.2 kDa

UniProt: [Q8IZ21](#)

Pathways: [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

Application Details

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. 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)

Images



Image 1. „Crystallography Grade“ protein due to multi-step, protein-specific purification process