

Datasheet for ABIN3092743

## Gephyrin Protein (GPHN) (AA 1-736) (Strep Tag)



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### Overview

Quantity:	250 µg
Target:	Gephyrin (GPHN)
Protein Characteristics:	AA 1-736
Origin:	Human
Source:	Cell-free protein synthesis (CFPS)
Protein Type:	Recombinant
Purification tag / Conjugate:	This Gephyrin protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

### Product Details

Brand:	AlIcE®
Sequence:	<p>MATEGMILTN HDHQIRVGVL TVSDSCFRNL AEDRSGINLK DLVQDPSLLG GTISAYKIVP  DEIEEIKETL IDWCDEKELN LILTTGGTGF APRDVTPEAT KEVIEREAPG MALAMLMGSL  NVTPLGMLSR PVCGIRGKTL IINLPGSKKG SQECFQFILP ALPHAIIDLLR DAIVKVKEVH  DELEDLPSPPP PPLSPPTTS PHKQTEDKGV QCEEEEEEEK DSGVASTEDS SSSHITAAAI  AAKIPDSIIS RGVQVLPRDT ASLSTTPSES PRAQATSRLS TASCPTPKVQ SRCSSKENIL  RASHSAVDIT KVARRHRMSP FPLTSMDFKAF ITVLEMTPLV GTEIINYRDG MGRVLAQDVY  AKDNLPPFPA SVKDGAVRA ADGPGDRFII GESQAGEQPT QTMMPGQVMR VTTGAPIPCG  ADAVVQVEDT ELIRESDDGT EELEVRILVQ ARPGQDIRPI GHDIKRGEV LAKGTHMGPS  EIGLLATVGV TEVEVNKFPV VAVMSTGNEL LNPEDDLLPG KIRDSNRSTL LATIQEHGYP  TINLGIVGDN PDDLLNALNE GISRADVIIT SGGVSMGEKD YLKQVLDIDL HAQIHFGRVF  MKPGLPTTFA TLDIDGVRKI IFALPGNPVS AVVTCNLFVV PALRKMQGIL DPRPTIIKAR</p>

LSCDVKLDPR PEYHRCILTW HHQEPLPWAQ STGNQMSSRL MSMRSANGLL MLPPKTEQYV  
ELHKGEVVDV MVIGRL

**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.**

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### 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!

#### 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®).

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## Product Details

Purity: > 70-80 % as determined by SDS PAGE, Western Blot and analytical SEC (HPLC).

Grade: custom-made

## Target Details

Target: Gephyrin (GPHN)

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

Background: Gephyrin [Includes: Molybdopterin adenylyltransferase (MPT adenylyltransferase) (EC 2.7.7.75) (Domain G), Molybdopterin molybdenumtransferase (MPT Mo-transferase) (EC 2.10.1.1) (Domain E)],FUNCTION: Microtubule-associated protein involved in membrane protein-cytoskeleton interactions. It is thought to anchor the inhibitory glycine receptor (GLYR) to subsynaptic microtubules (By similarity). Acts as a major instructive molecule at inhibitory synapses, where it also clusters GABA type A receptors (PubMed:25025157, PubMed:26613940). {ECO:0000250|UniProtKB:Q03555, ECO:0000269|PubMed:25025157, ECO:0000269|PubMed:26613940}., FUNCTION: Has also a catalytic activity and catalyzes two steps in the biosynthesis of the molybdenum cofactor. In the first step, molybdopterin is adenylylated. Subsequently, molybdate is inserted into adenylylated molybdopterin and AMP is released. {ECO:0000269|PubMed:26613940}.

Molecular Weight: 79.7 kDa

UniProt: [Q9NQX3](#)

Pathways: [Synaptic Membrane](#), [Skeletal Muscle Fiber Development](#)

## 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

Application Details

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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 <b>Might differ depending on protein.</b>
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	12 months