

Datasheet for ABIN3079148

## DPH2 Protein (AA 1-489) (Strep Tag)



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### Overview

Quantity:	1 mg
Target:	DPH2
Protein Characteristics:	AA 1-489
Origin:	Human
Source:	Cell-free protein synthesis (CFPS)
Protein Type:	Recombinant
Purification tag / Conjugate:	This DPH2 protein is labelled with Strep Tag.
Application:	ELISA, SDS-PAGE (SDS), Western Blotting (WB)

### Product Details

Brand:	AliCE®
Sequence:	<p>MESMFSSPAE AALQRETGVP GLLTPLPDLG GYELERVAG FVRDLGCERV ALQFPDQLLG            DAVAVAARLE ETTGSKMFIL GDTAYGSCCV DVLGAEQAGA QALIHFGPAC LSPPARPLPV            AFVLRQRSVA LELCVKAFA QNPDPKAPVV LLSEPACAH LEALATLLRP RYLDLLVSSP            AFPQPVGSLS PEPMPLEFRG RRFPLAPGRR LEEYGAFYVG GSKASDPDL DPDLRLLLG            WAPGQPFSSC CPDTGKTQDE GARAGRLRAR RRYLVERARD ARVVGLLAGT LGVAQHREAL            AHLRNLTQAA GKRSYVLALG RPTPAKLANF PEVDVVFVLLA CPLGALAPQL SGSFFQPILA            PCELEAACNP AWPPPGLAPH LTHYADLLPG SPFHVALPPP ESELWETPDV SLITGDLRPP            PAWKSSNDHG SLALTPRPQL ELAESSPAAS FLSSRSWQGL EPRLGQTPVT EAVSGRRGIA            IAYEDEGSG</p> <p><b>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</b></p>

**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.

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Purification:

One-step Strep-tag purification of proteins expressed in Almost Living Cell-Free Expression System (ALiCE®).

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Purity:

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

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Grade:

custom-made

## Target Details

Target:	DPH2
Alternative Name:	DPH2 ( <a href="#">DPH2 Products</a> )
Background:	<p>2-(3-amino-3-carboxypropyl)histidine synthase subunit 2 (Diphthamide biosynthesis protein 2) (Diphtheria toxin resistance protein 2) (S-adenosyl-L-methionine:L-histidine 3-amino-3-carboxypropyltransferase 2),FUNCTION: Required for the first step of diphthamide biosynthesis, a post-translational modification of histidine which occurs in elongation factor 2 (PubMed:32576952). DPH1 and DPH2 transfer a 3-amino-3-carboxypropyl (ACP) group from S-adenosyl-L-methionine (SAM) to a histidine residue, the reaction is assisted by a reduction system comprising DPH3 and a NADH-dependent reductase (By similarity). Facilitates the reduction of the catalytic iron-sulfur cluster found in the DPH1 subunit (By similarity). {ECO:0000250 UniProtKB:P32461, ECO:0000269 PubMed:32576952}.</p>
Molecular Weight:	52.1 kDa
UniProt:	<a href="#">Q9BQC3</a>

## 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:	<p>ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from <i>Nicotiana tabacum</i> 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.</p> <p>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!</p>
Restrictions:	For Research Use only

## Handling

Format:	Liquid
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## Handling

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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