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Datasheet for ABIN3129573  
**EHHADH Protein (AA 1-718) (Strep Tag)**

### Overview

Quantity:	1 mg
Target:	EHHADH
Protein Characteristics:	AA 1-718
Origin:	Mouse
Source:	Tobacco ( <i>Nicotiana tabacum</i> )
Protein Type:	Recombinant
Purification tag / Conjugate:	This EHHADH protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

### Product Details

Sequence: MAEYLRLPHS LAMIRLCNPP VNAISPTVIT EVRNLQKAS LDHTVRAIVI CGANDNFCAG  
ADIHGFKSPT GLTLGSLVDE IQRYQKPVVA AIQGVALLGG LELALGCHYR IANAKARVGF  
PEVMLGILPG ARGTLQPRV VGVVALDLI TSGRHISTDE ALKLGILDVV VKSDPVVEEAI  
KFAQTVIGKP IEPRLNKP VPSLPNMDSV FAEIAKVRK QYPGRLAPET CVRSVQASVK  
HPYEVAIKEE AKLFMYLRGS GQARALQYAF FAEKSANKWS TPGASWKTA SAQPVSSVGV  
LGLGTMGRGI AISFARVGP VAVESDPKQ LDTAKKIITS TLEKEASKSG QASAKPNLRF  
SSSTKELSSV DLVIEAVFED MNLKKKVFAE LSALCKPGAF LCTNTSALDV DDIASSTDRP  
QLVIGTHFFS PAHIMRLLLEV IPSRYSSPTT IATVMSLSKR IGKIGVVVGN CYGFVGNRML  
APYYNQGYFL IEEGSKPEDV DGVLEEFGR MGPFRVSDLA GLDVGWVKVRK GQGLTGPSLP  
PGTPTRKRGV TRYSPADML CEAGRFGQKT GKGWYQYDKP LGRIHKPDPW LSEFLSQYRE  
THHIKQRSIS KEEILERCLY SLINEAFRIL EEGMAASPEH IDVIYHGYG WPRHVGGPMY  
YAASVGLPTV LEKLQKYRQ NPDIPQLEPS DYLRRLVAQG SPPLKEWQSL AGPHSSKL

**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 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®):

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## Product Details

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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.

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Purity:  $\geq 80\%$  as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.

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Endotoxin Level: Low Endotoxin less than 1 EU/mg (< 0.1 ng/mg)

## Target Details

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Target: EHHADH

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Alternative Name: Ehhadh ([EHHADH Products](#))

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Background: Peroxisomal bifunctional enzyme (PBE) (PBFE) (L-peroxisomal bifunctional enzyme) (L-PBE) (Multifunctional enzyme 1) (MFE1) (Multifunctional protein 1) (MFP-1) [Includes: Enoyl-CoA hydratase/3,2-trans-enoyl-CoA isomerase (EC 4.2.1.17) (EC 5.3.3.8), 3-hydroxyacyl-CoA dehydrogenase (EC 1.1.1.35)],FUNCTION: Peroxisomal trifunctional enzyme possessing 2-enoyl-CoA hydratase, 3-hydroxyacyl-CoA dehydrogenase, and delta 3, delta 2-enoyl-CoA isomerase activities. Catalyzes two of the four reactions of the long chain fatty acids peroxisomal beta-oxidation pathway (PubMed:17442273, PubMed:24075987). Can also use branched-chain fatty acids such as 2-methyl-2E-butenoyl-CoA as a substrate, which is hydrated into (2S,3S)-3-hydroxy-2-methylbutanoyl-CoA (By similarity). Optimal isomerase for 2,5 double bonds into 3,5 form isomerization in a range of enoyl-CoA species. Also able to isomerize both 3-cis and 3-trans double bonds into the 2-trans form in a range of enoyl-CoA species (By similarity). With HSD17B4, catalyzes the hydration of trans-2-enoyl-CoA and the dehydrogenation of 3-hydroxyacyl-CoA, but with opposite chiral specificity (Probable). Regulates the amount of medium-chain dicarboxylic fatty acids which are essential regulators of all fatty acid oxidation pathways (PubMed:24075987). Also involved in the degradation of long-chain dicarboxylic acids through peroxisomal beta-oxidation (By similarity). {ECO:0000250|UniProtKB:P07896, ECO:0000250|UniProtKB:Q08426, ECO:0000269|PubMed:17442273, ECO:0000269|PubMed:24075987, ECO:0000305|PubMed:24075987}.

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Molecular Weight: 78.3 kDa

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UniProt: [Q9DBM2](#)

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Pathways: [Monocarboxylic Acid Catabolic Process](#)

## Application Details

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**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.

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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!

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**Restrictions:** For Research Use only

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## Handling

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**Format:** Liquid

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**Buffer:** The buffer composition is at the discretion of the manufacturer. If you have a special request, please contact us.

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**Handling Advice:** Avoid repeated freeze-thaw cycles.

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**Storage:** -80 °C

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**Storage Comment:** Store at -80°C.

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**Expiry Date:** Unlimited (if stored properly)

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