Datasheet for ABIN3090049

BDH2 Protein (AA 1-245) (Strep Tag)

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Overview

Quantity:	1 mg
Target:	BDH2
Protein Characteristics:	AA 1-245
Origin:	Human
Source:	Cell-free protein synthesis (CFPS)
Protein Type:	Recombinant
Purification tag / Conjugate:	This BDH2 protein is labelled with Strep Tag.
Application:	ELISA, SDS-PAGE (SDS), Western Blotting (WB)

Product Details

Brand:	AliCE®
Sequence:	MGRLDGKVII LTAAAQGIGQ AAALAFAREG AKVIATDINE SKLQELEKYP GIQTRVLDVT KKKQIDQFAN EVERLDVLFN VAGFVHHGTV LDCEEKDWDF SMNLNVRSMY LMIKAFLPKM LAQKSGNIIN MSSVASSVKG VVNRCVYSTT KAAVIGLTKS VAADFIQQGI RCNCVCPGTV DTPSLQERIQ ARGNPEEARN DFLKRQKTGR FATAEEIAML CVYLASDESA YVTGNPVIID GGWSL **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 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®).
Purity:	> 70-80 % as determined by SDS PAGE, Western Blot and analytical SEC (HPLC).
Grade:	custom-made

Target Details

Target:	BDH2
Alternative Name:	BDH2 (BDH2 Products)
Background:	Dehydrogenase/reductase SDR family member 6 (EC 1.1.1.-) ((R)-beta-hydroxybutyrate

Target Details

	dehydrogenase) (3-hydroxybutyrate dehydrogenase type 2) (EC 1.1.1.30) (4-oxo-L-proline reductase) (EC 1.1.1.104) (Oxidoreductase UCPA) (Short chain dehydrogenase/reductase family 15C member 1),FUNCTION: NAD(H)-dependent dehydrogenase/reductase with a preference for cyclic substrates (PubMed:35150746) (By similarity). Catalyzes stereoselective conversion of 4-oxo-L-proline to cis-4-hydroxy-L-proline, likely a detoxification mechanism for ketoprolines (PubMed:35150746). Mediates the formation of 2,5-dihydroxybenzoate (2,5-DHBA), a siderophore that chelates free cytoplasmic iron and associates with LCN2, thereby regulating iron transport and homeostasis while protecting cells against free radical-induced oxidative stress. The iron-siderophore complex is imported into mitochondria, providing an iron source for mitochondrial metabolic processes in particular heme synthesis (By similarity). May act as a 3-hydroxybutyrate dehydrogenase (PubMed:16380372). {ECO:0000250|UniProtKB:Q8JZV9, ECO:0000269|PubMed:16380372, ECO:0000269|PubMed:35150746}.
Molecular Weight:	26.7 kDa
UniProt:	Q9BUT1
Pathways:	Transition Metal Ion Homeostasis, Monocarboxylic Acid Catabolic Process

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 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. Standard Storage Buffer: PBS pH 7.4, 10 % Glycerol **Might differ depending on protein.**
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	12 months