

Datasheet for ABIN3092909
HDAC4 Protein (AA 1-1084) (Strep Tag)

1 Image



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Overview

Quantity:	1 mg
Target:	HDAC4
Protein Characteristics:	AA 1-1084
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This HDAC4 protein is labelled with Strep Tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA

Product Details

Sequence:	MSSQSHPDGL SGRDQPVELL NPARVNHMPS TVDVATALPL QVAPSAVPMD LRLDHQFSLP VAEPALREQQ LQQELLALKQ KQQIQRQILI AEFQRQHEQL SRQHEAQLHE HIKQQQEMLA MKHQELLEH QRKLERHRQE QELEKQHREQ KLQQLKNKEK GKESAVASTE VKMKLQEFVL NKKKALAHRN LNHCISSDPR YWYGKTQHSS LDQSSPPQSG VSTSYNHPVL GMYDAKDDFP LRKTASEPNL KLRSRLKQKV AERRSSPLLR RKDGPVVTAL KKRPLDVTDS ACSSAPGSGP SSPNNSSGSV SAENGIAPAV PSIPAETSLA HRLVAREGSA APLPLYTSPS LPNITLGLPA TGPSAGTAGQ QDAERLTLPALQQRLSLFPG THLTPYLSTS PLERDGGAAH SPLLQHMLVLL EQPPAQAPLV TGLGALPLHA QSLVGADRVS PSIHKLQRHR PLGRTQSAPL PQNAQALQHL VIQQQHQQFL EKHKQQFQQQ QLQMNKIIPK PSEPARQPES HPEETEEELR EHQALLDEPY LDRLPGQKEA HAQAGVQVKQ EPIESDEEEA EPPREVEPGQ RQPSEQELLF RQQALLLEQQ RIHQLRNYQA SMEAAGIPVS FGGHRPLSRA QSSPASATFP VSVQEPPTKP RFTTGLVYDT LMLKHQCTCG SSSSHPEHAG RIQSIWSRLQ ETGLRGKCEC IRGRKATLEE LQTVHSEAHT
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LLYGTNPLNR QKLDSKLLG SLASVFRRLP CGGVGVSDST IWNEVHSAGA ARLAVGCVVE
LVFKVATGEL KNGFAVVRPP GHHAESTPM GFCYFNSVAV AAKLLQQRSL VSKILVDWD
VHHGNGTQQA FYSDPSVLYM SLHRYDDGNF FPGSGAPDEV GTGPGVGFNV NMAFTGGLDP
PMGDAEYLAA FRTVVMPIAS EFAPDVVLVS SGFDAVEGHP TPLGGYNLSA RCFGYLTKQL
MGLAGGRIVL ALEGHDLTA ICDASEACVS ALLGNELDPL PEKVLQQRPN ANAVRSMEKV
MEIHSKYWRC LQRTTSTAGR SLIEAQTEN EEAETVTAMA SLSVGVKPAE KRPDEEPMEE EPPL

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.

Product Details

- 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®): 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:	HDAC4
Alternative Name:	HDAC4 (HDAC4 Products)
Background:	Histone deacetylase 4 (HD4) (EC 3.5.1.98),FUNCTION: Responsible for the deacetylation of lysine residues on the N-terminal part of the core histones (H2A, H2B, H3 and H4). Histone deacetylation gives a tag for epigenetic repression and plays an important role in transcriptional regulation, cell cycle progression and developmental events. Histone deacetylases act via the formation of large multiprotein complexes. Involved in muscle maturation via its interaction with the myocyte enhancer factors such as MEF2A, MEF2C and MEF2D. Involved in the MTA1-mediated epigenetic regulation of ESR1 expression in breast cancer. Deacetylates HSPA1A and HSPA1B at 'Lys-77' leading to their preferential binding to co-chaperone STUB1 (PubMed:27708256). {ECO:0000269 PubMed:10523670, ECO:0000269 PubMed:24413532, ECO:0000269 PubMed:27708256}.
Molecular Weight:	119.0 kDa
UniProt:	P56524
Pathways:	Regulation of Muscle Cell Differentiation , Skeletal Muscle Fiber Development , Regulation of Carbohydrate Metabolic 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.
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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>
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Restrictions:	For Research Use only
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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)



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