

Datasheet for ABIN3092926
HDAC2 Protein (AA 1-488) (Strep Tag)



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Overview

Quantity:	1 mg
Target:	HDAC2
Protein Characteristics:	AA 1-488
Origin:	Human
Source:	Tobacco (<i>Nicotiana tabacum</i>)
Protein Type:	Recombinant
Purification tag / Conjugate:	This HDAC2 protein is labelled with Strep Tag.
Application:	SDS-PAGE (SDS), Western Blotting (WB), ELISA

Product Details

Sequence: MAYSQGGGKK KVCYYYDGGI GNYYYYGQGH MKPHRIRMTH NLLLNYGLYR KMEIYRPHKA
TAEEMTKYHS DEYIKFLRSI RPDNMSEYSK QMQRFNVED CPVFDGLFEF CQLSTGGSVA
GAVKLNRRQT DMAVNWAGGL HHAKKSEASG FCYVNDIVLA ILELLKYHQR VLYIDIDIHH
GDGVVEAFYT TDRVMTVSFH KYGEYFPGTG DLRDIGAGKG KYYAVNFPMR DGIDDESYGQ
IFKPIISKVM EMYQPSAVVL QCGADSLSGD RLGCNLTVK GHAKCVEVVK TFLNPLMLLG
GGGYTIRNVA RCWYETAVA LDCEIPNELP YNDYFEYFGP DFKLHISPSN MTNQNTPEYM
EKIKQRLFEN LRMLPHAPGV QMQAIPEDAV HEDSGDEDGE DPKRISIRA SDKRIACDEE
FSDSEDEGEG GRRNVADHKK GAKKARIEED KKETEDKKT D VKEEDKSKDN SGEKTDTKGT
KSEQLSNP

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.

Product Details

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:

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

Target Details

Target:

HDAC2

Target Details

Alternative Name: HDAC2 ([HDAC2 Products](#))

Background: Histone deacetylase 2 (HD2) (EC 3.5.1.98) (Protein deacylase HDAC2) (EC 3.5.1.-),FUNCTION: Histone deacetylase that catalyzes the deacetylation of lysine residues on the N-terminal part of the core histones (H2A, H2B, H3 and H4) (PubMed:28497810). Histone deacetylation gives a tag for epigenetic repression and plays an important role in transcriptional regulation, cell cycle progression and developmental events (By similarity). Histone deacetylases act via the formation of large multiprotein complexes (By similarity). Forms transcriptional repressor complexes by associating with MAD, SIN3, YY1 and N-COR (PubMed:12724404). Component of a RCOR/GFI/KDM1A/HDAC complex that suppresses, via histone deacetylase (HDAC) recruitment, a number of genes implicated in multilineage blood cell development (By similarity). Acts as a component of the histone deacetylase NuRD complex which participates in the remodeling of chromatin (PubMed:16428440, PubMed:28977666). Component of the SIN3B complex that represses transcription and counteracts the histone acetyltransferase activity of EP300 through the recognition H3K27ac marks by PHF12 and the activity of the histone deacetylase HDAC2 (PubMed:37137925). Also deacetylates non-histone targets: deacetylates TSHZ3, thereby regulating its transcriptional repressor activity (PubMed:19343227). May be involved in the transcriptional repression of circadian target genes, such as PER1, mediated by CRY1 through histone deacetylation (By similarity). Involved in MTA1-mediated transcriptional corepression of TFF1 and CDKN1A (PubMed:21965678). In addition to protein deacetylase activity, also acts as a protein-lysine deacylase by recognizing other acyl groups: catalyzes removal of (2E)-butenoyl (crotonyl) and 2-hydroxyisobutanoyl (2-hydroxyisobutyryl) acyl groups from lysine residues, leading to protein decrotonylation and de-2-hydroxyisobutyrylation, respectively (PubMed:28497810, PubMed:29192674). {ECO:0000250|UniProtKB:P70288, ECO:0000269|PubMed:12724404, ECO:0000269|PubMed:16428440, ECO:0000269|PubMed:19343227, ECO:0000269|PubMed:21965678, ECO:0000269|PubMed:28497810, ECO:0000269|PubMed:28977666, ECO:0000269|PubMed:29192674, ECO:0000269|PubMed:37137925}.

Molecular Weight: 55.4 kDa

UniProt: [Q92769](#)

Pathways: [Neurotrophin Signaling Pathway](#), [Regulation of Muscle Cell Differentiation](#), [Negative Regulation of intrinsic apoptotic Signaling](#), [SARS-CoV-2 Protein Interactome](#), [The Global Phosphorylation Landscape of SARS-CoV-2 Infection](#)

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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Restrictions: For Research Use only

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)
