Datasheet for ABIN3131387

HDAC1 Protein (AA 1-482) (Strep Tag)

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Overview

Quantity:	250 µg
Target:	HDAC1
Protein Characteristics:	AA 1-482
Origin:	Mouse
Source:	Cell-free protein synthesis (CFPS)
Protein Type:	Recombinant
Purification tag / Conjugate:	This HDAC1 protein is labelled with Strep Tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA

Product Details

Brand:	AliCE®
Sequence:	MAQTQGTKRK VCYYYDGDVG NYYYGQGHPM KPHRIRMTHN LLLNYGLYRK MEIYRPHKAN AEEMTKYHSD DYIKFLRSIR PDNMSEYSKQ MQRFNVGEDC PVFDGLFEFC QLSTGGSVAS AVKLNKQQTD IAVNWAGGLH HAKKSEASGF CYVNDIVLAI LELLKYHQRV LYIDIDIHHG DGVEEAFYTT DRVMTVSFHK YGEYFPGTGD LRDIGAGKGK YYAVNYPLRD GIDDESYEAI FKPVMSKVME MFQPSAVVLQ CGSDSLSGDR LGCFNLTIKG HAKCVEFVKS FNLPMLMLGG GGYTIRNVAR CWTYETAVAL DTEIPNELPY NDYFEYFGPD FKLHISPSNM TNQNTNEYLE KIKQRLFENL RMLPHAPGVQ MQAIPEDAIP EESGDEDEED PDKRISICSS DKRIACEEEF SDSDEEGEGG RKNSSNFKKA KRVKTEDEKE KDPEEKKEVT EEEKTKEEKP EAKGVKEEVK LA **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:	> 70-80 % as determined by SDS PAGE, Western Blot and analytical SEC (HPLC).
Grade:	custom-made

Target Details

Target:	HDAC1
Alternative Name:	Hdac1 (HDAC1 Products)
Background:	Histone deacetylase 1 (HD1) (EC 3.5.1.98) (Protein deacetylase HDAC1) (EC 3.5.1.-) (Protein decrotonylase HDAC1) (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:10615135, PubMed:15542849, PubMed:21960634, PubMed:30279482). Histone deacetylation gives a tag for epigenetic repression and plays an important role in transcriptional regulation, cell cycle progression and developmental events (PubMed:10615135, PubMed:15542849, PubMed:21960634). Histone deacetylases act via the formation of large multiprotein complexes (PubMed:10615135, PubMed:21960634). Acts as a component of the histone deacetylase NuRD complex which participates in the remodeling of chromatin (By similarity). As part of the SIN3B complex is recruited downstream of the constitutively active genes transcriptional start sites through interaction with histones and mitigates histone acetylation and RNA polymerase II progression within transcribed regions contributing to the regulation of transcription (By similarity). Also functions as a deacetylase for non-histone targets, such as NR1D2, RELA, SP1, SP3, STAT3 and TSHZ3 (By similarity). Deacetylates SP proteins, SP1 and SP3, and regulates their function (By similarity). Component of the BRG1-RB1-HDAC1 complex, which negatively regulates the CREST-mediated transcription in resting neurons (By similarity). Upon calcium stimulation, HDAC1 is released from the complex and CREBBP is recruited, which facilitates transcriptional activation (By similarity). Deacetylates TSHZ3 and regulates its transcriptional repressor activity (By similarity). Deacetylates 'Lys-310' in RELA and thereby inhibits the transcriptional activity of NF-kappa-B (By similarity). Deacetylates NR1D2 and abrogates the effect of KAT5-mediated relieving of NR1D2 transcription repression activity (By similarity). 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 (PubMed:17707228). Involved in CIART-mediated transcriptional repression of the circadian transcriptional activator: CLOCK-BMAL1 heterodimer (PubMed:15226430, PubMed:24736997). Required for the transcriptional repression of circadian target genes, such as PER1, mediated by the large PER complex or CRY1 through histone deacetylation (PubMed:15226430). In addition to protein deacetylase activity, also has protein-lysine deacylase activity: acts as a protein decrotonylase by mediating decrotonylation ((2E)-butenoyl) of histones (PubMed:30279482). {ECO:0000250|UniProtKB:Q13547, ECO:0000269|PubMed:10615135, ECO:0000269|PubMed:15226430, ECO:0000269|PubMed:15542849, ECO:0000269|PubMed:17707228, ECO:0000269|PubMed:21960634,

Target Details

	ECO:0000269|PubMed:24736997, ECO:0000269|PubMed:30279482}.
Molecular Weight:	55.1 kDa
UniProt:	O09106
Pathways:	Neurotrophin Signaling Pathway, Intracellular Steroid Hormone Receptor Signaling Pathway, Regulation of Intracellular Steroid Hormone Receptor Signaling, Mitotic G1-G1/S Phases, Regulation of Muscle Cell Differentiation, Skeletal Muscle Fiber Development, Negative Regulation of intrinsic apoptotic Signaling, Embryonic Body Morphogenesis

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.

Handling

Expiry Date:	12 months