Datasheet for ABIN3092908

HDAC3 Protein (AA 1-428) (Strep Tag)

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Overview

Quantity:	250 µg
Target:	HDAC3
Protein Characteristics:	AA 1-428
Origin:	Human
Source:	Cell-free protein synthesis (CFPS)
Protein Type:	Recombinant
Purification tag / Conjugate:	This HDAC3 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Brand:	AliCE®
Sequence:	MAKTVAYFYD PDVGNFHYGA GHPMKPHRLA LTHSLVLHYG LYKKMIVFKP YQASQHDMCR FHSEDYIDFL QRVSPTNMQG FTKSLNAFNV GDDCPVFPGL FEFCSRYTGA SLQGATQLNN KICDIAINWA GGLHHAKKFE ASGFCYVNDI VIGILELLKY HPRVLYIDID IHHGDGVQEA FYLTDRVMTV SFHKYGNYFF PGTGDMYEVG AESGRYYCLN VPLRDGIDDQ SYKHLFQPVI NQVVDFYQPT CIVLQCGADS LGCDRLGCFN LSIRGHGECV EYVKSFNIPL LVLGGGGYTV RNVARCWTYE TSLLVEEAIS EELPYSEYFE YFAPDFTLHP DVSTRIENQN SRQYLDQIRQ TIFENLKMLN HAPSVQIHDV PADLLTYDRT DEADAEERGP EENYSRPEAP NEFYDGDHDN DKESDVEI **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:	HDAC3
Alternative Name:	HDAC3 (HDAC3 Products)
Background:	Histone deacetylase 3 (HD3) (EC 3.5.1.98) (Protein deacetylase HDAC3) (EC 3.5.1.-) (Protein deacylase HDAC3) (EC 3.5.1.-) (RPD3-2) (SMAP45),FUNCTION: Histone deacetylase that catalyzes the deacetylation of lysine residues on the N-terminal part of the core histones (H2A, H2B, H3 and H4), and some other non-histone substrates (PubMed:23911289, PubMed:21030595, PubMed:21444723, PubMed:25301942, PubMed:28497810, PubMed:28167758, PubMed:32404892). Histone deacetylation gives a tag for epigenetic repression and plays an important role in transcriptional regulation, cell cycle progression and developmental events (PubMed:23911289). Histone deacetylases act via the formation of large multiprotein complexes (PubMed:23911289). Participates in the BCL6 transcriptional repressor activity by deacetylating the H3 'Lys-27' (H3K27) on enhancer elements, antagonizing EP300 acetyltransferase activity and repressing proximal gene expression (PubMed:23911289). Acts as a molecular chaperone for shuttling phosphorylated NR2C1 to PML bodies for sumoylation (By similarity). Contributes, together with XBP1 isoform 1, to the activation of NFE2L2-mediated HMOX1 transcription factor gene expression in a PI(3)K/mTORC2/Akt-dependent signaling pathway leading to endothelial cell (EC) survival under disturbed flow/oxidative stress (PubMed:25190803). Regulates both the transcriptional activation and repression phases of the circadian clock in a deacetylase activity-independent manner (By similarity). During the activation phase, promotes the accumulation of ubiquitinated BMAL1 at the E-boxes and during the repression phase, blocks FBXL3-mediated CRY1/2 ubiquitination and promotes the interaction of CRY1 and BMAL1 (By similarity). The NCOR1-HDAC3 complex regulates the circadian expression of the core clock gene BMAL1 and the genes involved in lipid metabolism in the liver (By similarity). Also functions as a deacetylase for non-histone targets, such as KAT5, MEF2D, MAPK14, RARA and STAT3 (PubMed:15653507, PubMed:21030595, PubMed:21444723, PubMed:25301942, PubMed:28167758). Serves as a corepressor of RARA, mediating its deacetylation and repression, leading to inhibition of RARE DNA element binding (PubMed:28167758). In association with RARA, plays a role in the repression of microRNA-10a and thereby in the inflammatory response (PubMed:28167758). 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, PubMed:34608293). Catalyzes decrotonylation of MAPRE1/EB1 (PubMed:34608293). {ECO:0000250|UniProtKB:O88895, ECO:0000269|PubMed:15653507,

Target Details

	ECO:0000269|PubMed:21030595, ECO:0000269|PubMed:21444723, ECO:0000269|PubMed:23911289, ECO:0000269|PubMed:25190803, ECO:0000269|PubMed:25301942, ECO:0000269|PubMed:28167758, ECO:0000269|PubMed:28497810, ECO:0000269|PubMed:29192674, ECO:0000269|PubMed:32404892, ECO:0000269|PubMed:34608293}.
Molecular Weight:	48.8 kDa
UniProt:	O15379
Pathways:	Neurotrophin Signaling Pathway, Regulation of Lipid Metabolism by PPARalpha, Regulation of Muscle Cell Differentiation, Skeletal Muscle Fiber Development

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

Handling

Storage Comment:	Store at -80°C.
Expiry Date:	12 months