

Datasheet for ABIN3092879

HDAC6 Protein (AA 1-1215) (Strep Tag)[Go to Product page](#)**1** Image

Overview

Quantity:	1 mg
Target:	HDAC6
Protein Characteristics:	AA 1-1215
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This HDAC6 protein is labelled with Strep Tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA

Product Details

Sequence:	MTSTGQDSTT TRQRRSRQNP QSPPQDSSVT SKRNIKKGAV PRSIPNLAEV KKKGKMKKLG QAMEEDLIVG LQGMDLNLEA EALAGTGLVL DEQLNEFHCL WDDSFPEGPE RLHAIKEQLI QEGLLDRCVS FQARFAEKKE LMLVHSLEYI DLMETTQYMN EGELRVLADT YDSVYLHPNS YSCACLASGS VLRLVDAVLG AEIRNGMAII RPPGHHAQHS LMDGYCMFNH VAVAARYAQQ KHRIRRVLIV DWDVHHGQGT QFTFDQDPSV LYFSIHRYEQ GRFWPHLKAS NWSTTGFGQG QGYTINVPWN QVGMRDADYI AAFLHVLLPV ALEFQPQLVL VAAGFDALQG DPKGEMAATP AGFAQLTHLL MGLAGGKLIL SLEGGYNLRA LAEGVSASLH TLLGDPCPML ESPGAPCRSA QASVSCALEA LEPFWEVLVR STETVERDNM EEDNVEESEE EGPWEPPVLP ILTWPVLQSR TGLVYDQNM NHCNLWDSSH PEVPQRILRI MCRLEELGLA GRCLTLTPRP ATEAELLTCH SAEYVGHLRA TEKMKTRELLH RESSNFDSIY ICPSTFACAQ LATGAACRLV EAVLSGEVLN GAAVVRPPGH HAEQDAACGF CFFNSVAVAA RHAQTISGHA LRILVDWDV HHGNGTQHMF EDDPSVLYVS LHRYDHGTFF PMGDEGASSQ IGRAAGTGFT VNVAVNGPRM GDADYLAAWH
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RLVLPIAYEF NPELVLSAG FDAARGDPLG GCQVSPEGYA HLTHLLMGLA SGRIILILEG
GYNLTSISES MAACTRSLLG DPPPLTLPR PPLSGALASI TETIQVHRRY WRSLRVMKVE
DREGPSSSKL VTKKAPQPAK PRLAERMTR EKKVLEAGMG KVTASAFGEE STPGQTNSSET
AVVALTQDQP SEATGGATL AQTISEAAIG GAMLGQTTSE EAVGGATPDQ TTSEETVGGGA
ILDQTTSEDA VGGATLGQTT SEEAVGGATL AQTTSSEAME GATLDQTTSE EAPGGTELIQ
TPLASSTDHQ TPPTSPVQGT TPQISPSTLI GSLRTLELGS ESQGASESQA PGEENLLGEA
AGGQDMADSM LMQGSRLTD QAIFYAVTPL PWCPHLVAVC PIPAAGLDVT QPCGDCGTIQ
ENWVCLSCYQ VYCGRYINGH MLQHHGNSGH PLVLSYIDLS AWCYYCQAYV HHQALLDVKN
IAHQNKFGED MPPHPH

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!

Product Details

Concentration:

- The concentration of our recombinant proteins is measured using the absorbance at 280nm.
- 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:

HDAC6

Alternative Name:

HDAC6 ([HDAC6 Products](#))

Background:

Histone deacetylase 6 (HD6) (EC 3.5.1.98) (Protein deacetylase HDAC6) (EC 3.5.1.-) (Tubulin-lysine deacetylase HDAC6) (EC 3.5.1.-),FUNCTION: Responsible for the deacetylation of lysine residues on the N-terminal part of the core histones (H2A, H2B, H3 and H4) (PubMed:10220385). Histone deacetylation gives a tag for epigenetic repression and plays an important role in transcriptional regulation, cell cycle progression and developmental events (PubMed:10220385). Histone deacetylases act via the formation of large multiprotein complexes (PubMed:10220385). In addition to histones, deacetylates other proteins, such as CTTN, tubulin and SQSTM1 (PubMed:12024216, PubMed:20308065, PubMed:26246421, PubMed:31857589, PubMed:30538141). Plays a central role in microtubule-dependent cell motility by mediating deacetylation of tubulin (PubMed:12024216, PubMed:20308065, PubMed:26246421). Required for cilia disassembly, via deacetylation of alpha-tubulin (PubMed:17604723, PubMed:26246421). Promotes deacetylation of CTTN, leading to actin polymerization, promotion of autophagosome-lysosome fusion and completion of autophagy

Target Details

(PubMed:30538141). Involved in the MTA1-mediated epigenetic regulation of ESR1 expression in breast cancer (PubMed:24413532). Promotes odontoblast differentiation following IPO7-mediated nuclear import and subsequent repression of RUNX2 expression (By similarity). In addition to its protein deacetylase activity, plays a key role in the degradation of misfolded proteins: when misfolded proteins are too abundant to be degraded by the chaperone refolding system and the ubiquitin-proteasome, mediates the transport of misfolded proteins to a cytoplasmic juxtanuclear structure called aggresome (PubMed:17846173). Probably acts as an adapter that recognizes polyubiquitinated misfolded proteins and target them to the aggresome, facilitating their clearance by autophagy (PubMed:17846173).

{ECO:0000250|UniProtKB:Q9Z2V5, ECO:0000269|PubMed:10220385, ECO:0000269|PubMed:12024216, ECO:0000269|PubMed:17604723, ECO:0000269|PubMed:17846173, ECO:0000269|PubMed:20308065, ECO:0000269|PubMed:24413532, ECO:0000269|PubMed:26246421, ECO:0000269|PubMed:30538141, ECO:0000269|PubMed:31857589}.

Molecular Weight:	131.4 kDa
UniProt:	Q9UBN7
Pathways:	Intracellular Steroid Hormone Receptor Signaling Pathway , Regulation of Intracellular Steroid Hormone Receptor Signaling

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:	<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>
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)

Images



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