

Datasheet for ABIN3092888
HDAC7 Protein (AA 1-952) (Strep Tag)



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Overview

Quantity:	1 mg
Target:	HDAC7
Protein Characteristics:	AA 1-952
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This HDAC7 protein is labelled with Strep Tag.
Application:	SDS-PAGE (SDS), ELISA, Western Blotting (WB)

Product Details

Sequence:	MDLRVGQRPP VEPPPEPTLL ALQRPQRLHH HLFLAGLQQQ RSVEPMRLSM DTPMPELQVG PQEQELRQLL HKDKSKRSAV ASSVVKQKLA EVILKKQQA LERTVHPNSP GIPYRTLEPL ETEGATRSML SSFLPPVPSL PSDPPEHFPL RKTVSEPNLK LRYKPKKSLE RRKNPLLRKE SAPPSLRRRP AETLGDSSPS SSSTPASGCS SPNDSEHGPN PILGSEALLG QRLRLQETSV APFALPTVSL LPAITLGLPA PARADSDRRT HPTLGPRGPI LGSPHTPLFL PHGLEPEAGG TLPSRLQPIL LLDPSGSHAP LLTVPGGLPL PFHFAQSLMT TERLSGSGLH WPLSRTRSEP LPPSATAPPP PGPMQPRLEQ LKTHVQVIKR SAKPSEKPRL RQIPSAEDLE TDGGGPGQVV DDGLEHRELG HGQPEARIPA PLQQHPQVLL WEQQRLAGRL PRGSTGDTV LPLAQGGHRP LSRAQSSPAA PASLSAPEPA SQARVLSSSE TPARTLPFTT GLIYDSVMLK HQCSCGDNSR HPEHAGRIQS IWSRLQERGL RSQCECLRGR KASLEELQSV HSERHVLLYG TNPLSRLKLD NGKLAGLLAQ RMFVMLPCGG VGVDTDTIWN ELHSSNAARW AAGSVTDLAF KVASRELKNG FAVVRPPGHH ADHSTAMGFC FFNSVAIACR QLQQQSKASK ILIVDWDVHH GNGTQQTFYQ
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DPSVLYISLH RHDDGNFFPG SGAVDEVGAG SGEFNVNVA WAGGLDPPMG DPEYLAAFR
VVMPIAREFS PDLVLVSAGF DAAEGHPAPL GGYHVSACF GYMTQQLMNL AGGAVVLAL
GGHDLTAICD ASEACVAALL GNRVDPLSEE GWKQKPNLNA IRSLEAVIRV HSKYWGCMQR
LASCPSWVP RVPGADKEEV EAVTALASLS VGILAEDRPS EQLVEEEPEM NL

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.
- The protein's absorbance will be measured in several dilutions and is measured against its specific reference buffer.

Product Details

- 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:	HDAC7
Alternative Name:	HDAC7 (HDAC7 Products)
Background:	<p>Histone deacetylase 7 (HD7) (EC 3.5.1.98) (Histone deacetylase 7A) (HD7a),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 by repressing transcription of myocyte enhancer factors such as MEF2A, MEF2B and MEF2C. During muscle differentiation, it shuttles into the cytoplasm, allowing the expression of myocyte enhancer factors (By similarity). May be involved in Epstein-Barr virus (EBV) latency, possibly by repressing the viral BZLF1 gene. Positively regulates the transcriptional repressor activity of FOXP3 (PubMed:17360565). Serves as a corepressor of RARA, causing its deacetylation and 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).</p> <p>{ECO:0000250 UniProtKB:Q8C2B3, ECO:0000269 PubMed:12239305, ECO:0000269 PubMed:17360565, ECO:0000269 PubMed:28167758}.</p>
Molecular Weight:	102.9 kDa
UniProt:	Q8WUI4

Target Details

Pathways: [Regulation of Muscle Cell Differentiation](#), [Cell-Cell Junction Organization](#), [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. 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