Datasheet for ABIN3095373

SETDB1 Protein (AA 1-1291) (Strep Tag)

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Overview

Quantity:	1 mg
Target:	SETDB1
Protein Characteristics:	AA 1-1291
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This SETDB1 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Sequence:	MSSLPGCIGL DAATATVESE EIAELQQAVV EELGISMEEL RHFIDEELEK MDCVQQRKKQ LAELETWVIQ KESEVAHVDQ LFDDASRAVT NCESLVKDFY SKLGLQYRDS SSEDESSRPT EIIEIPDEDD DVLSIDSGDA GSRTPKDQKL REAMAALRKS AQDVQKFMDA VNKKSSSQDL HKGTLSQMSG ELSKDGDLIV SMRILGKKRT KTWHKGTLIA IQTVGPGKKY KVKFDNKGKS LLSGNHIAYD YHPPADKLYV GSRVVAKYKD GNQVWLYAGI VAETPNVKNK LRFLIFFDDG YASYVTQSEL YPICRPLKKT WEDIEDISCR DFIEEYVTAY PNRPMVLLKS GQLIKTEWEG TWWKSRVEEV DGSLVRILFL DDKRCEWIYR GSTRLEPMFS MKTSSASALE KKQGQLRTRP NMGAVRSKGP VVQYTQDLTG TGTQFKPVEP PQPTAPPAPP FPPAPPLSPQ AGDSDLESQL AQSRKQVAKK STSFRPGSVG SGHSSPTSPA LSENVSGGKP GINQTYRSPL GSTASAPAPS ALPAPPAPPV FHGMLERAPA EPSYRAPMEK LFYLPHVCSY TCLSRVRPMR NEQYRGKNPL LVPLLYDFRR MTARRRVNRK MGFHVIYKTP CGLCLRTMQE IERYLFETGC DFLFLEMFCL DPYVLVDRKF QPYKPFYYIL DITYGKEDVP LSCVNEIDTT PPPQVAYSKE RIPGKGVFIN

TGPEFLVGCD CKDGCRDKSK CACHQLTIQA TACTPGGQIN PNSGYQYKRL EECLPTGVYE CNKRCKCDPN MCTNRLVQHG LQVRLQLFKT QNKGWGIRCL DDIAKGSFVC IYAGKILTDD FADKEGLEMG DEYFANLDHI ESVENFKEGY ESDAPCSSDS SGVDLKDQED GNSGTEDPEE SNDDSSDDNF CKDEDFSTSS VWRSYATRRQ TRGQKENGLS ETTSKDSHPP DLGPPHIPVP PSIPVGGCNP PSSEETPKNK VASWLSCNSV SEGGFADSDS HSSFKTNEGG EGRAGGSRME AEKASTSGLG IKDEGDIKQA KKEDTDDRNK MSVVTESSRN YGYNPSPVKP EGLRRPPSKT SMHQSRRLMA SAQSNPDDVL TLSSSTESEG ESGTSRKPTA GQTSATAVDS DDIQTISSGS EGDDFEDKKN MTGPMKRQVA VKSTRGFALK STHGIAIKST NMASVDKGES APVRKNTRQF YDGEESCYII DAKLEGNLGR YLNHSCSPNL FVQNVFVDTH DLRFPWVAFF ASKRIRAGTE LTWDYNYEVG SVEGKELLCC CGAIECRGRL L

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 -

Product Details

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.
- 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)

Target Details

Target:	SETDB1
Alternative Name:	SETDB1 (SETDB1 Products)
Background:	Histone-lysine N-methyltransferase SETDB1 (EC 2.1.1.366) (ERG-associated protein with SET domain) (ESET) (Histone H3-K9 methyltransferase 4) (H3-K9-HMTase 4) (Lysine N-methyltransferase 1E) (SET domain bifurcated 1),FUNCTION: Histone methyltransferase that specifically trimethylates 'Lys-9' of histone H3. H3 'Lys-9' trimethylation represents a specific tag for epigenetic transcriptional repression by recruiting HP1 (CBX1, CBX3 and/or CBX5) proteins to methylated histones. Mainly functions in euchromatin regions, thereby playing a central role in the silencing of euchromatic genes. H3 'Lys-9' trimethylation is coordinated with DNA methylation (PubMed:12869583). Required for HUSH-mediated heterochromatin formation and gene silencing. Forms a complex with MBD1 and ATF7IP that represses transcription and couples DNA methylation and histone 'Lys-9' trimethylation (PubMed:27732843, PubMed:14536086). Its activity is dependent on MBD1 and is heritably maintained through DNA replication by being recruited by CAF-1 (PubMed:14536086). SETDB1 is targeted to histone H3 by TRIM28/TIF1B, a factor recruited by KRAB zinc-finger proteins.

Target Details

	Probably forms a corepressor complex required for activated KRAS-mediated promoter hypermethylation and transcriptional silencing of tumor suppressor genes (TSGs) or other tumor-related genes in colorectal cancer (CRC) cells (PubMed:24623306). Required to maintain a transcriptionally repressive state of genes in undifferentiated embryonic stem cells (ESCs) (PubMed:24623306). In ESCs, in collaboration with TRIM28, is also required for H3K9me3 and silencing of endogenous and introduced retroviruses in a DNA-methylation independent-pathway (By similarity). Associates at promoter regions of tumor suppressor genes (TSGs) leading to their gene silencing (PubMed:24623306). The SETDB1-TRIM28-ZNF274 complex may play a role in recruiting ATRX to the 3'-exons of zinc-finger coding genes with atypical chromatin signatures to establish or maintain/protect H3K9me3 at these transcriptionally active regions (PubMed:27029610). {ECO:0000250|UniProtKB:O88974, ECO:0000269|PubMed:12869583, ECO:0000269|PubMed:14536086, ECO:0000269|PubMed:24623306, ECO:0000269|PubMed:27029610, ECO:0000269|PubMed:27732843}.
Molecular Weight:	143.2 kDa
UniProt:	Q15047

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)

