Datasheet for ABIN3095195

SATB1 Protein (AA 1-763) (Strep Tag)

1 Image

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Overview

Quantity:	1 mg
Target:	SATB1
Protein Characteristics:	AA 1-763
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This SATB1 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Sequence:	MDHLNEATQG KEHSEMSNNV SDPKGPPAKI ARLEQNGSPL GRGRLGSTGA KMQGVPLKHS GHLMKTNLRK GTMLPVFCVV EHYENAIEYD CKEEHAEFVL VRKDMLFNQL IEMALLSLGY SHSSAAQAKG LIQVGKWNPV PLSYVTDAPD ATVADMLQDV YHVVTLKIQL HSCPKLEDLP PEQWSHTTVR NALKDLLKDM NQSSLAKECP LSQSMISSIV NSTYYANVSA AKCQEFGRWY KHFKKTKDMM VEMDSLSELS QQGANHVNFG QQPVPGNTAE QPPSPAQLSH GSQPSVRTPL PNLHPGLVST PISPQLVNQQ LVMAQLLNQQ YAVNRLLAQQ SLNQQYLNHP PPVSRSMNKP LEQQVSTNTE VSSEIYQWVR DELKRAGISQ AVFARVAFNR TQGLLSEILR KEEDPKTASQ SLLVNLRAMQ NFLQLPEAER DRIYQDERER SLNAASAMGP APLISTPPSR PPQVKTATIA TERNGKPENN TMNINASIYD EIQQEMKRAK VSQALFAKVA ATKSQGWLCE LLRWKEDPSP ENRTLWENLS MIRRFLSLPQ PERDAIYEQE SNAVHHHGDR PPHIIHVPAE QIQQQQQQQQ QQQQQQQAPP PPQPQQQPQT GPRLPPRQPT VASPAESDEE NRQKTRPRTK ISVEALGILQ SFIQDVGLYP DEEAIQTLSA QLDLPKYTII KFFQNQRYYL KHHGKLKDNS GLEVDVAEYK

	EEELLKDLEE SVQDKNTNTL FSVKLEEELS VEGNTDINTD LKD **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. • 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

Product Details

	(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:	SATB1
Alternative Name:	SATB1 (SATB1 Products)
Background:	DNA-binding protein SATB1 (Special AT-rich sequence-binding protein 1),FUNCTION: Crucial silencing factor contributing to the initiation of X inactivation mediated by Xist RNA that occurs during embryogenesis and in lymphoma (By similarity). Binds to DNA at special AT-rich sequences, the consensus SATB1-binding sequence (CSBS), at nuclear matrix- or scaffold-associated regions. Thought to recognize the sugar-phosphate structure of double-stranded DNA. Transcriptional repressor controlling nuclear and viral gene expression in a phosphorylated and acetylated status-dependent manner, by binding to matrix attachment regions (MARs) of DNA and inducing a local chromatin-loop remodeling. Acts as a docking site for several chromatin remodeling enzymes (e.g. PML at the MHC-I locus) and also by recruiting corepressors (HDACs) or coactivators (HATs) directly to promoters and enhancers. Modulates genes that are essential in the maturation of the immune T-cell CD8SP from thymocytes. Required for the switching of fetal globin species, and beta- and gamma-globin genes regulation during erythroid differentiation. Plays a role in chromatin organization and nuclear architecture during apoptosis. Interacts with the unique region (UR) of cytomegalovirus (CMV). Alu-like motifs and SATB1-binding sites provide a unique chromatin context which seems preferentially targeted by the HIV-1 integration machinery. Moreover, HIV-1 Tat may overcome SATB1-mediated repression of IL2 and IL2RA (interleukin) in T-cells by binding to the same domain than HDAC1. Delineates specific epigenetic modifications at target gene loci, directly up-regulating metastasis-associated genes while down-regulating tumor-suppressor genes. Reprograms chromatin organization and the transcription profiles of breast tumors to promote growth and metastasis. Promotes neuronal differentiation of neural stem/progenitor cells in the

Target Details

	adult subventricular zone, possibly by positively regulating the expression of NEUROD1 (By similarity). {ECO:0000250|UniProtKB:Q60611, ECO:0000269|PubMed:10595394, ECO:0000269|PubMed:11463840, ECO:0000269|PubMed:12374985, ECO:0000269|PubMed:12692553, ECO:0000269|PubMed:1505028, ECO:0000269|PubMed:15618465, ECO:0000269|PubMed:15713622, ECO:0000269|PubMed:16377216, ECO:0000269|PubMed:16630892, ECO:0000269|PubMed:17173041, ECO:0000269|PubMed:17376900, ECO:0000269|PubMed:18337816, ECO:0000269|PubMed:19103759, ECO:0000269|PubMed:19247486, ECO:0000269|PubMed:19332023, ECO:0000269|PubMed:19430959, ECO:0000269|PubMed:33513338, ECO:0000269|PubMed:9111059, ECO:0000269|PubMed:9548713}.
Molecular Weight:	86.0 kDa
UniProt:	Q01826
Pathways:	Caspase Cascade in Apoptosis, Activated T Cell Proliferation

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

Handling

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

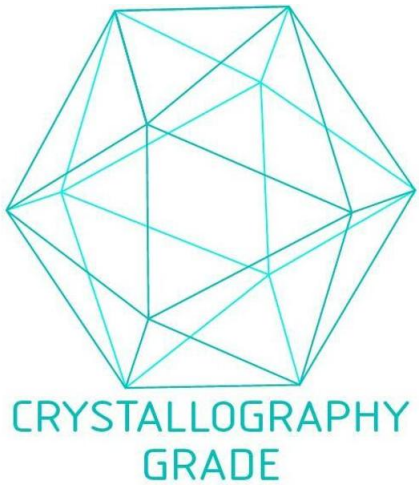

Image 1. „Crystallography Grade“ protein due to multi-step, protein-specific purification process