Datasheet for ABIN3134928

NSUN2 Protein (AA 1-757) (Strep Tag)

Go to Product page

Overview

Quantity:	250 µg
Target:	NSUN2
Protein Characteristics:	AA 1-757
Origin:	Mouse
Source:	Cell-free protein synthesis (CFPS)
Protein Type:	Recombinant
Purification tag / Conjugate:	This NSUN2 protein is labelled with Strep Tag.
Application:	ELISA, SDS-PAGE (SDS), Western Blotting (WB)

Product Details

Brand:	AliCE®
Sequence:	MGRRARGRRF QQPPQPEGEE DASDGGRKRG QAGWEGGYPE IVKENKLFEH YYQELKIVPE GEWDQFMESL REPLPATLRI TGYKSHAKEI LHCLKNKYFK ELEDLEVDGQ KVEVPQPLSW YPEELAWHTN LSRKILRKSP LLAKFHQFLV SETESGNISR QEAVSMIPPL LLNVEPHHKI LDMCAAPGSK TTQLIEMLHA DMSVPFPEGF VIANDVDNKR CYLLVHQAKR LSSPCIMVVN HDASSIPRLT VDVDGRKEIL FYDRILCDVP CSGDGTMRKN IDVWKKWTTL NSLQLHGLQL RIATRGAEQL AEGGRMVYST CSLNPVEDEA VIAALLEKSE GALELADVSA ELPGLKWMPG VSQWKVMTRD GQWFADWHEV PQGRHTQIRP TMFPPTDLEK LQAMHLERCL RILPHHQNTG GFFVAVLVKK APMPWNKRQP KVQNKSAEAR EPRVSSHVAA TEGNPSDQSE LESQMITGAG DSETAHNTEN TESNEKKDGV CGPPPSKKMK LFGFKEDPFV FIPEDDPLFP PIEKFYALDP SFPRMNLLTR TTEGKKRQLY MVSKELRNVL LNNSEKMKVI NTGIKVWCRN NSGEEFDCAF RLAQEGIYTL YPFINSRIIT VSMEDVKTLL TQENPFFRKL SSEAYSQVKD LAKGSVVLKY

EPDSANPDTL QCPIVLCGWR GKASIRTFVP KNERLHYLRM MGLEVLGEKK KEGVILTNEN AASPEQPGDE DAKQTAQDPC VPDSVPGCDA AAAEPSR

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 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®).

Product Details

Purity:	> 70-80 % as determined by SDS PAGE, Western Blot and analytical SEC (HPLC).
Grade:	custom-made

Target Details

Target:	NSUN2
Alternative Name:	Nsun2 (NSUN2 Products)
Background:	RNA cytosine C(5)-methyltransferase NSUN2 (EC 2.1.1.-) (Myc-induced SUN domain-containing protein) (Misu) (NOL1/NOP2/Sun domain family member 2) (mRNA cytosine C(5)-methyltransferase) (EC 2.1.1.-) (tRNA cytosine C(5)-methyltransferase) (EC 2.1.1.-, EC 2.1.1.203),FUNCTION: RNA cytosine C(5)-methyltransferase that methylates cytosine to 5-methylcytosine (m5C) in various RNAs, such as tRNAs, mRNAs and some long non-coding RNAs (lncRNAs) (PubMed:22144916, PubMed:23871666, PubMed:31199786). Involved in various processes, such as epidermal stem cell differentiation, testis differentiation and maternal to zygotic transition during early development: acts by increasing protein synthesis, cytosine C(5)-methylation promoting tRNA stability and preventing mRNA decay (PubMed:22144916, PubMed:22885326, PubMed:23401851, PubMed:31199786). Methylates cytosine to 5-methylcytosine (m5C) at positions 34 and 48 of intron-containing tRNA(Leu)(CAA) precursors, and at positions 48, 49 and 50 of tRNA(Gly)(GCC) precursors (PubMed:22885326, PubMed:23871666, PubMed:31199786). tRNA methylation is required generation of RNA fragments derived from tRNAs (tRFs) (PubMed:31199786). Also mediates C(5)-methylation of mitochondrial tRNAs (PubMed:31276587, PubMed:31287866). Catalyzes cytosine C(5)-methylation of mRNAs, leading to stabilize them and prevent mRNA decay: mRNA stabilization involves YBX1 that specifically recognizes and binds m5C-modified transcripts (By similarity). Cytosine C(5)-methylation of mRNAs also regulates mRNA export: methylated transcripts are specifically recognized by THOC4/ALYREF, which mediates mRNA nucleo-cytoplasmic shuttling (By similarity). Also mediates cytosine C(5)-methylation of non-coding RNAs, such as vault RNAs (vtRNAs), promoting their processing into regulatory small RNAs (PubMed:23871666). Cytosine C(5)-methylation of vtRNA VTRNA1.1 promotes its processing into small-vault RNA4 (svRNA4) and regulates epidermal differentiation (By similarity). May act downstream of Myc to regulate epidermal cell growth and proliferation (PubMed:16713953). Required for proper spindle assembly and chromosome segregation, independently of its methyltransferase activity (PubMed:19596847). {ECO:0000250|UniProtKB:Q08J23, ECO:0000269|PubMed:16713953, ECO:0000269|PubMed:19596847, ECO:0000269|PubMed:22144916, ECO:0000269|PubMed:22885326,

Target Details

	ECO:0000269|PubMed:23401851, ECO:0000269|PubMed:23871666, ECO:0000269|PubMed:31199786, ECO:0000269|PubMed:31276587, ECO:0000269|PubMed:31287866}.
Molecular Weight:	85.5 kDa
UniProt:	Q1HFZ0

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