Datasheet for ABIN3083710

METTL4 Protein (AA 1-472) (Strep Tag)

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Overview

Quantity:	1 mg
Target:	METTL4
Protein Characteristics:	AA 1-472
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This METTL4 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Sequence:	MSVVHQLSAG WLLDHLSFIN KINYQLHQHH EPCCRKKEFT TSVHFESLQM DSVSSSGVCA AFIASDSSTK PENDDGGNYE MFTRKFVFRP ELFDVTKPYI TPAVHKECQQ SNEKEDLMNG VKKEISISII GKKRKRCVVF NQGELDAMEY HTKIRELILD GSLQLIQEGL KSGFLYPLFE KQDKGSKPIT LPLDACSLSE LCEMAKHLPS LNEMEHQTLQ LVEEDTSVTE QDLFLRVVEN NSSFTKVITL MGQKYLLPPK SSFLLSDISC MQPLLNYRKT FDVIVIDPPW QNKSVKRSNR YSYLSPLQIQ QIPIPKLAAP NCLLVTWVTN RQKHLRFIKE ELYPSWSVEV VAEWHWVKIT NSGEFVFPLD SPHKKPYEGL ILGRVQEKTA LPLRNADVNV LPIPDHKLIV SVPCTLHSHK PPLAEVLKDY IKPDGEYLEL FARNLQPGWT SWGNEVLKFQ HVDYFIAVES GS **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 (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.

Product Details

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:	METTL4
Alternative Name:	METTL4 (METTL4 Products)
Background:	N(6)-adenine-specific methyltransferase METTL4 (Methyltransferase-like protein 4) (N(6)-adenine-specific DNA methyltransferase METTL4) (EC 2.1.1.72) (snRNA (2'-O-methyladenosine-N(6)-)-methyltransferase METTL4) (EC 2.1.1.-),FUNCTION: N(6)-adenine-specific methyltransferase that can methylate both RNAs and DNA (PubMed:31913360, PubMed:32183942). Acts as a N(6)-adenine-specific RNA methyltransferase by catalyzing formation of N6,2'-O-dimethyladenosine (m6A(m)) on internal positions of U2 small nuclear RNA (snRNA): methylates the 6th position of adenine residues with a pre-deposited 2'-O-methylation (PubMed:31913360). Internal m6A(m) methylation of snRNAs regulates RNA splicing (PubMed:31913360). Also able to act as a N(6)-adenine-specific DNA methyltransferase by mediating methylation of DNA on the 6th position of adenine (N(6)-methyladenosine) (PubMed:32183942). The existence of N(6)-methyladenosine (m6A) on DNA is however unclear in mammals, and additional evidences are required to confirm the role of the N(6)-adenine-specific DNA methyltransferase activity of METTL4 in vivo (PubMed:32203414). Acts as a regulator of mitochondrial transcript levels and mitochondrial DNA (mtDNA) copy number by mediating mtDNA N(6)-methylation: m6A on mtDNA reduces transcription by repressing TFAM DNA-binding and bending (PubMed:32183942). N(6)-methyladenosine deposition by METTL4 regulates Polycomb silencing by triggering ubiquitination and degradation of sensor proteins ASXL1 and MPND, leading to inactivation of the PR-DUB complex and subsequent preservation of Polycomb silencing (By similarity). {ECO:0000250|UniProtKB:Q3U034, ECO:0000269|PubMed:31913360, ECO:0000269|PubMed:32183942, ECO:0000269|PubMed:32203414}.
Molecular Weight:	54.0 kDa
UniProt:	Q8N3J2

Application Details

Application Notes:	In addition to the applications listed above we expect the protein to work for functional studies

Application Details

	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

