Datasheet for ABIN3085075

NUDT12 Protein (AA 1-462) (Strep Tag)

Go to Product page

Overview

Quantity:	1 mg
Target:	NUDT12
Protein Characteristics:	AA 1-462
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This NUDT12 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Sequence:	MSSVKRSLKQ EIVTQFHCSA AEGDIAKLTG ILSHSPSLLN ETSENGWTAL MYAARNGHPE IVQFLLEKGC DRSIVNKSRQ TALDIAVFWG YKHIANLLAT AKGGKKPWFL TNEVEECENY FSKTLLDRKS EKRNNSDWLL AKESHPATVF ILFSDLNPLV TLGGNKESFQ QPEVRLCQLN YTDIKDYLAQ PEKITLIFLG VELEIKDKLL NYAGEVPREE EDGLVAWFAL GIDPIAAEEF KQRHENCYFL HPPMPALLQL KEKEAGVVAQ ARSVLAWHSR YKFCPTCGNA TKIEEGGYKR LCLKEDCPSL NGVHNTSYPR VDPVVIMQVI HPDGTKCLLG RQKRFPPGMF TCLAGFIEPG ETIEDAVRRE VEEESGVKVG HVQYVACQPW PMPSSLMIGC LALAVSTEIK VDKNEIEDAR WFTREQVLDV LTKGKQQAFF VPPSRAIAHQ LIKHWIRINP 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.
- 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)

Target Details

Target:	NUDT12
Alternative Name:	NUDT12 (NUDT12 Products)
Background:	NAD-capped RNA hydrolase NUDT12 (DeNADding enzyme NUDT12) (EC 3.6.1.-) (NADH pyrophosphatase NUDT12) (EC 3.6.1.22) (Nucleoside diphosphate-linked moiety X motif 12) (Nudix motif 12),FUNCTION: mRNA decapping enzyme that specifically removes the nicotinamide adenine dinucleotide (NAD) cap from a subset of mRNAs by hydrolyzing the diphosphate linkage to produce nicotinamide mononucleotide (NMN) and 5' monophosphate mRNA (PubMed:31101919, PubMed:31875550). The NAD-cap is present at the 5'-end of some RNAs, in contrast to the canonical N7 methylguanosine (m7G) cap, the NAD cap promotes mRNA decay (PubMed:31101919). Preferentially acts on NAD-capped transcripts in response to nutrient stress (PubMed:31101919). Also acts on free nicotinamide adenine dinucleotide molecules: hydrolyzes NAD(H) into NMN(H) and AMP, and NADPH into NMNH and 2',5'-ADP (PubMed:12790796). May act to regulate the concentration of peroxisomal nicotinamide nucleotide cofactors required for oxidative metabolism in this organelle (PubMed:12790796). Regulates the levels of circadian clock components PER1, PER2, PER3 and CRY2 in the liver (By similarity). {ECO:0000250|UniProtKB:Q9DCN1, ECO:0000269|PubMed:12790796, ECO:0000269|PubMed:31101919, ECO:0000269|PubMed:31875550}.
Molecular Weight:	52.1 kDa
UniProt:	Q9BQG2

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

Application Details

	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)