

Datasheet for ABIN3083830

MIOS Protein (AA 1-875) (Strep Tag)



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1 Image

Overview

Quantity:	1 mg
Target:	MIOS
Protein Characteristics:	AA 1-875
Origin:	Human
Source:	Tobacco (<i>Nicotiana tabacum</i>)
Protein Type:	Recombinant
Purification tag / Conjugate:	This MIOS protein is labelled with Strep Tag.
Application:	ELISA, SDS-PAGE (SDS), Western Blotting (WB)

Product Details

Sequence: MSGTKPDILW APHHVDRFVV CDSELSLYHV ESTVNSELKA GSLRLSEDSA ATLLSINSDT
PYMKCVAWYL NYDPECLLAV GQANGRVVLT SLGQDHNSKF KDLIGKEFVP KHARQCNTLA
WNPLDSNWL AGLDKHRADF SVLIWDICSK YTPDIVPMEK VKLSAGETET TLLVTKPLYE
LGQNDAQLSL CWLPRDQKLL LAGMHRNLAI FDLRNTSQKM FVNTKAVQGV TVDPYFHDRV
ASFYEGQVAI WDLRKFEPV LTLTEQPKPL TKVAWCPTRT GLLATLTRDS NIIRLYDMQH
TPTPIGDETE PTIERSVQP CDNYIASFAW HPTSQNMIV VTPNRTMSDF TVFERISLAW
SPITSLMWAC GRHLYECTEE ENDNSLEKDI ATKMRLRALS RYGLDTEQVW RNHILAGNED
PQLKSLWYTL HFMKQYTEDM DQKSPGNKGS LVYAGIKSIV KSSLGMVESS RHNWGLDKQ
SDIQNLNEER ILALQLCGWI KKGTDVDVGP FLNSLVQEGE WERAAVAALF NLDIRRAIQI
LNEGASSEKG DLNLNVVAMA LSGYTDEKNS LWREMCSTLR LQLNNPYLCV MFAFLTSETG
SYDGVLYENK VAVRDRVAFA CKFLSDTQLN RYIEKLTNEM KEAGNLEGIL LTGLTKDGVD
LMESYVDRTG DVQTASYCML QGSPLDVLKD ERVQYWIENY RNLLDAWRFW HKRAEFDIHR

SKLDPSSKPL AQVFVSCNFC GKSISYSCSA VPHQGRGFSQ YGVSGSPTKS KVTSCPGCRK
PLPRCALCLI NMGTPVSSCP GGTKSDEKVD LSKDKKLAQF NNWFTWCHNC RHGGHAGHML
SWFRDHAACP VSACTCKCMQ LDTTGNLVPA ETVQP

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.

Product Details

Purification:	Two step purification of proteins expressed in Almost Living Cell-Free Expression System (ALiCE®): <ol style="list-style-type: none">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:	MIOS
Alternative Name:	MIOS (MIOS Products)
Background:	<p>GATOR2 complex protein MIOS (Missing oocyte meiosis regulator homolog),FUNCTION: As a component of the GATOR2 complex, functions as an activator of the amino acid-sensing branch of the mTORC1 signaling pathway (PubMed:23723238, PubMed:26586190, PubMed:27487210, PubMed:36528027, PubMed:35831510). The GATOR2 complex indirectly activates mTORC1 through the inhibition of the GATOR1 subcomplex (PubMed:23723238, PubMed:26586190, PubMed:27487210, PubMed:36528027, PubMed:35831510). GATOR2 probably acts as an E3 ubiquitin-protein ligase toward GATOR1 (PubMed:36528027). In the presence of abundant amino acids, the GATOR2 complex mediates ubiquitination of the NPRL2 core component of the GATOR1 complex, leading to GATOR1 inactivation (PubMed:36528027). In the absence of amino acids, GATOR2 is inhibited, activating the GATOR1 complex (PubMed:25263562, PubMed:25457612, PubMed:26586190, PubMed:27487210). Within the GATOR2 complex, MIOS is required to prevent autoubiquitination of WDR24, the catalytic subunit of the complex (PubMed:35831510). The GATOR2 complex is required for brain myelination (By similarity). {ECO:0000250 UniProtKB:Q8VE19, ECO:0000269 PubMed:23723238, ECO:0000269 PubMed:25263562, ECO:0000269 PubMed:25457612, ECO:0000269 PubMed:26586190, ECO:0000269 PubMed:27487210, ECO:0000269 PubMed:35831510, ECO:0000269 PubMed:36528027}.</p>
Molecular Weight:	98.6 kDa
UniProt:	Q9NXC5

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)



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