Datasheet for ABIN3083830

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

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Overview

Quantity:	250 µg
Target:	MIOS
Protein Characteristics:	AA 1-875
Origin:	Human
Source:	Cell-free protein synthesis (CFPS)
Protein Type:	Recombinant
Purification tag / Conjugate:	This MIOS protein is labelled with Strep Tag.
Application:	ELISA, SDS-PAGE (SDS), Western Blotting (WB)

Product Details

Brand:	AliCE®
Sequence:	MSGTKPDILW APHHVDRFVV CDSELSLYHV ESTVNSELKA GSLRLSEDSA ATLLSINSDT PYMKCVAWYL NYDPECLLAV GQANGRVVLT SLGQDHNSKF KDLIGKEFVP KHARQCNTLA WNPLDSNWLA AGLDKHRADF SVLIWDICSK YTPDIVPMEK VKLSAGETET TLLVTKPLYE LGQNDACLSL CWLPRDQKLL LAGMHRNLAI FDLRNTSQKM FVNTKAVQGV TVDPYFHDRV ASFYEGQVAI WDLRKFEKPV LTLTEQPKPL TKVAWCPTRT GLLATLTRDS NIIRLYDMQH TPTPIGDETE PTIIERSVQP CDNYIASFAW HPTSQNRMIV VTPNRTMSDF TVFERISLAW SPITSLMWAC GRHLYECTEE ENDNSLEKDI ATKMRLRALS RYGLDTEQVW RNHILAGNED PQLKSLWYTL HFMKQYTEDM DQKSPGNKGS LVYAGIKSIV KSSLGMVESS RHNWSGLDKQ SDIQNLNEER ILALQLCGWI KKGTDVDVGP FLNSLVQEGE WERAAAVALF 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 SWFRDHAECP 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 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.

Product Details

Purification:	One-step Strep-tag purification of proteins expressed in Almost Living Cell-Free Expression System (AliCE®).
Purity:	> 70-80 % as determined by SDS PAGE, Western Blot and analytical SEC (HPLC).
Grade:	custom-made

Target Details

Target:	MIOS
Alternative Name:	MIOS (MIOS Products)
Background:	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}.
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.

Application Details

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