

Datasheet for ABIN3076918

SMCR8 Protein (AA 1-937) (Strep Tag)



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Overview

Quantity:	250 µg
Target:	SMCR8
Protein Characteristics:	AA 1-937
Origin:	Human
Source:	Cell-free protein synthesis (CFPS)
Protein Type:	Recombinant
Purification tag / Conjugate:	This SMCR8 protein is labelled with Strep Tag.
Application:	ELISA, SDS-PAGE (SDS), Western Blotting (WB)

Product Details

Brand:	AliCE®
Sequence:	MISAPDVVAF TKEEYEEEP YNEPALPEEY SVPLFPFASQ GANPWSKLSG AKFSRDFILI SEFSEQVGPQ PLLTIPNDTK VFGTFDLNYF SLRIMSVDYQ ASFVGHPGGS AYPKLNVED SKVVLGDSKE GAFAYVHHLT LYDLEARGFV RPFCEMAYISA DQHKIMQQFQ ELSAEFSRAS ECLKTGNRKA FAGELEKKLK DLDYTRTVLH TETEIQKKAN DKGFYSSQAI EKANELASVE KSIIEHQDLL KQIRSYPHRK LKGHDLCPE MEHIQDQASQ ASTTSNPDES ADTDLYTCRP AYTPKLIKAK STKCFDKKLK TLEELCDTEY FTQTLAQLSH IEHMFGRDLC YLLTSQIDRA LLKQQHITNF LFEDFVEVDD RMVEKQESIP SKPSQDRPPS SSLEECPIPK VLISVGSYKS SVESVLIKME QELGDEEYKE VEVTELSSFD PQENLDYLD DMKGSISSGE SIEVLGTEKS TSVLSKSDSQ ASLTVPLSPQ VVRSAVSHR TISEDSEVL STCPSEALIP DDFKASYPSA INEEESYPDG NEGAIRFQAS ISPELGETE EGSIENTPSQ IDSSCCIGKE SDGQLVLPST PAHTHSDG VVSSPPQRHR QKDQGFRVDF SVENANPSSR DNSCEGFPAY ELDPSHLLAS

RDISKTSLDN YSDTTSYVSS VASTSSDRIP SAYPAGLSSD RHKKRAGQNA LKFIRQYPFA
HPAIYSLLSG RTLVLGEDE AIVRKLVTAL AIFVPSYGCY AKPVKHWASS PLHIMDFQKW
KLIGLQRVAS PAGAGTLHAL SRYSTRYSIL DLDNKTLRCP LYRGTLVPRL ADHRTQIKRG
STYYLHVQSM LTQLCSKAFL YTFCHHLHLP THDKETEELV ASRQMSFLKL TLGLVNEDVR
VVQYLAELLK LHYMQESPGT SHPMLRFDYV PSFLYKI

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: SMCR8

Alternative Name: SMCR8 ([SMCR8 Products](#))

Background: Guanine nucleotide exchange protein SMCR8 (Smith-Magenis syndrome chromosomal region candidate gene 8 protein), FUNCTION: Component of the C9orf72-SMCR8 complex, a complex that has guanine nucleotide exchange factor (GEF) activity and regulates autophagy (PubMed:20562859, PubMed:27193190, PubMed:27103069, PubMed:27559131, PubMed:27617292, PubMed:28195531, PubMed:32303654). In the complex, C9orf72 and SMCR8 probably constitute the catalytic subunits that promote the exchange of GDP to GTP, converting inactive GDP-bound RAB8A and RAB39B into their active GTP-bound form, thereby promoting autophagosome maturation (PubMed:20562859, PubMed:27103069, PubMed:27617292, PubMed:28195531). The C9orf72-SMCR8 complex also acts as a negative regulator of autophagy initiation by interacting with the ULK1/ATG1 kinase complex and inhibiting its protein kinase activity (PubMed:27617292, PubMed:28195531). As part of the C9orf72-SMCR8 complex, stimulates RAB8A and RAB11A GTPase activity in vitro (PubMed:32303654). Acts as a regulator of mTORC1 signaling by promoting phosphorylation of mTORC1 substrates (PubMed:27559131, PubMed:28195531). In addition to its activity in the cytoplasm within the C9orf72-SMCR8 complex, SMCR8 also localizes in the nucleus, where it associates with chromatin and negatively regulates expression of suppresses ULK1 and WIPI2 genes (PubMed:28195531). {ECO:0000269|PubMed:20562859, ECO:0000269|PubMed:27103069, ECO:0000269|PubMed:27193190, ECO:0000269|PubMed:27559131, ECO:0000269|PubMed:27617292, ECO:0000269|PubMed:28195531, ECO:0000269|PubMed:32303654}.

Molecular Weight: 105.0 kDa

UniProt: [Q8TEV9](#)

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