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Datasheet for ABIN3134936  
**MCM9 Protein (AA 1-1134) (Strep Tag)**

### Overview

Quantity:	1 mg
Target:	MCM9
Protein Characteristics:	AA 1-1134
Origin:	Mouse
Source:	Tobacco ( <i>Nicotiana tabacum</i> )
Protein Type:	Recombinant
Purification tag / Conjugate:	This MCM9 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

### Product Details

Sequence: MNSEQVTLVG QVFESYVSEY HKNDILLILK ERDEDAHYPV VVNAMSLFET NMEIGDYFTV  
FPNEVLTVFD SALRRSALAI LQSLPETEGL SMKQNLHARI SGLPVCPELV REHIPKTKDV  
GHFLSVTGTV IRTSLVKVLE FERDYMCNKC KHVFMVEADF EQYYTFSRPS SCPSLASCDS  
SKFSCLSDLS SSPARCRDYQ EIKIQEQVQR LSVGSIPRSM KVILEDLVD SCKSGDDLT  
YGVVMQRWKP FQRDVRCEVE IVLKANYVQV NNEQSSGMVM DEDTRKEFED FWEHYKSDPF  
AGRNEILASL CPQVFGMYLV KLAIVAMVLAG GIQRTDAAGT RVRGESHELLL VGDPGTGKSQ  
FLKYAAKITP RSVLTTGIGS TSAGLTVTAV KDSGEWNLEA GALVLADAGL CCIDEFNLSK  
EHDRTSIHEA MEQQTISVAK AGLVCKLNTR TTILAATNPK GQYDPKESVS VNIALGSPLL  
SRFDLVLLVLL DTRNEDWDRI ISSFILENKG YPSKSENLWS MEKMKTYFCL IRNLHPTLSE  
VSNQVLLRYY QMQRQSDSRN AARTTIRLLE SLIRLAEAHA RLMFRSAVTL EDAVTAVSVM  
ESSMQGALL GGVNALHTSF PENPRAQYQR QCELILEKLE LQGLLQEELR RLRLQNESV  
HQCQSHSLEE EVAPGSCRND PRDKPRLRTS TQQEQSCSWS STERSGADSP PGPGLNRPTS

CNNSAENRDG RGDGLDWLDP TSSPEIAPES TIVSPNVKTT EKNVNLKISN NKSQGKEKHG  
PQQRSKLLEA GHLPSSGAMN APLRSHGVKR TKASQAVVVS EAGRGDEEDS VPRRLPKLLK  
EGSQNVCRST TRVRPLPPTV PLSLSIPSPG SGKRSRTPKR KRRKSAQVEE PEPEGMETPT  
VKLAKFTFKQ KTKLTHSPEG QGPIPPSASE IAVDSSKIPQ QRTRREAAVP VVAPGKSTST  
SGDRCSDDLH GKTKELSRQP PDSNPPREER EQGPKRRVIQ PKPELGNQAG HSHLACEKDR  
KEGVSCGNKS SKVHAGTIAR LASFSFTSPS ESKSESLPPE RKDSRDRSRS RDSRDRCHSP  
PATTAPVLGQ QRQTFQLQQP TERANLSTLS LFTLSELDDE ALDFDWEEM RKKP

**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.**

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### 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:

## Product Details

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- 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.

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**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.

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**Purity:** ≥ 80 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.

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**Endotoxin Level:** Low Endotoxin less than 1 EU/mg (< 0.1 ng/mg)

## Target Details

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**Target:** MCM9

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**Alternative Name:** Mcm9 ([MCM9 Products](#))

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**Background:** DNA helicase MCM9 (EC 3.6.4.12) (Mini-chromosome maintenance deficient domain-containing protein 1) (Minichromosome maintenance 9),FUNCTION: Component of the MCM8-MCM9 complex, a complex involved in the repair of double-stranded DNA breaks (DBSs) and DNA interstrand cross-links (ICLs) by homologous recombination (HR) (PubMed:23401855, PubMed:22771120). Required for DNA resection by the MRE11-RAD50-NBN/NBS1 (MRN) complex at double-stranded DNA breaks to generate ssDNA by recruiting the MRN complex to the repair site and by promoting the complex nuclease activity (By similarity). Probably by regulating the localization of the MNR complex, indirectly regulates the recruitment of downstream effector RAD51 to DNA damage sites including DBSs and ICLs (PubMed:22771120, PubMed:23401855). Acts as a helicase in DNA mismatch repair (MMR) following DNA replication errors to unwind the mismatch containing DNA strand (PubMed:22771120, PubMed:26300262). In addition, recruits MLH1, a component of the MMR complex, to chromatin (By similarity). The MCM8-MCM9 complex is dispensable for DNA replication and S phase progression (PubMed:21987787). Probably by regulating HR, plays a key role during gametogenesis (PubMed:21987787, PubMed:22771120).  
{ECO:0000250|UniProtKB:Q9NXL9, ECO:0000269|PubMed:21987787,

## Target Details

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ECO:0000269|PubMed:22771120, ECO:0000269|PubMed:23401855,  
ECO:0000269|PubMed:26300262}.

Molecular Weight: 125.8 kDa

UniProt: [Q2KHI9](#)

## Application Details

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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

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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)