



[Go to Product page](#)

Datasheet for ABIN3137633
MBD1 Protein (AA 1-636) (Strep Tag)

Overview

Quantity:	1 mg
Target:	MBD1
Protein Characteristics:	AA 1-636
Origin:	Mouse
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This MBD1 protein is labelled with Strep Tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA

Product Details

Sequence: MAESWQDCPA LGPGWKRRES FRKSGASFGR SDIYYQSPTG EKIRSKVELT RYLGPACDLT
 LFDFRQGTLC HPIPKTHPLA VPSKKKKKPS KPAKTKKQV GLQRSEVRIE TPQGEYKAPT
 ATALASLSVS ASASSASAS ASASSHAPVC CENCGIHFSW DGVKRQLKT LCKDCRAQRI
 AFNREQRMFK RVGCGDCAAC LVKEDCGVCS TCRLQLPSDV ASGLYCKCER RRCLRIMEKS
 RGCGVCRGCQ TQEDCGHCCI CLRSPRGLK RQWRCLQRRC FWGKRDSKR GSKVASQRHS
 QAPPLPPHPA SQYTEPELH ISDIAPSPA EFIYYCVDED EDELQPYTNQ RQNRKCGACA
 ACLRRMDCGR CDFCCDKPKF GGGNQKRQKC RWRQCLQFAM KRLLPSAGSG SGEGAGLRPY
 QTHQTHQKRP ASARQLQLSS PLKAPWAVVT APPGPVRDSR KQAGRGSVL PQPDTDFVFL
 QEGTSSAMQM PGTAAASTEVE PVQAAQCSAP SWVVALPQVK QETADAPEEW TAVTTFLTSS
 TLQSGFPSKA ADPDLSPVKQ EPPGPEEDGE EKKDDVSETT PAEEIGGVGT PVITEIFSLG
 GTRLRDAAEW LPRLHKLLAV NEKEYFTELQ LKEEVL

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
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Product Details

- 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: $\geq 80\%$ 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: MBD1

Alternative Name: Mbd1 ([MBD1 Products](#))

Background: Methyl-CpG-binding domain protein 1 (Methyl-CpG-binding protein MBD1),FUNCTION: Transcriptional repressor that binds CpG islands in promoters where the DNA is methylated at position 5 of cytosine within CpG dinucleotides. Binding is abolished by the presence of 7-mG that is produced by DNA damage by methylmethanesulfonate (MMS). Acts as transcriptional repressor and plays a role in gene silencing by recruiting ATF7IP, which in turn recruits factors such as the histone methyltransferase SETDB1. Probably forms a complex with SETDB1 and ATF7IP that represses transcription and couples DNA methylation and histone 'Lys-9' trimethylation. Isoform 1 can also repress transcription from unmethylated promoters. {ECO:0000269|PubMed:15060159, ECO:0000269|PubMed:9774669}.

Molecular Weight: 70.0 kDa

UniProt: [Q9Z2E2](#)

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.

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Application Details

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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)