Datasheet for ABIN3093906

# MTA1 Protein (AA 1-715) (Strep Tag)

1 Image

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## Overview

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| Quantity: | 1 mg |
| Target: | MTA1 |
| Protein Characteristics: | AA 1-715 |
| Origin: | Human |
| Source: | Tobacco (Nicotiana tabacum) |
| Protein Type: | Recombinant |
| Purification tag / Conjugate: | This MTA1 protein is labelled with Strep Tag. |
| Application: | Western Blotting (WB), SDS-PAGE (SDS), ELISA |

## Product Details

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| Sequence: | MAANMYRVGD YVYFENSSSN PYLIRRIEEL NKTANGNVEA KVVCFYRRRD ISSTLIALAD KHATLSVCYK AGPGADNGEE GEIEEEMENP EMVDLPEKLK HQLRHRELFL SRQLESLPAT HIRGKCSVTL LNETESLKSY LEREDFFFYS LVYDPQQKTL LADKGEIRVG NRYQADITDL LKEGEEDGRD QSRLETQVWE AHNPLTDKQI DQFLVVARSV GTFARALDCS SSVRQPSLHM SAAAASRDIT LFHAMDTLHK NIYDISKAIS ALVPQGGPVL CRDEMEEWSA SEANLFEEAL EKYGKDFTDI QQDFLPWKSL TSIIEYYYMW KTTDRYVQQK RLKAAEAESK LKQVYIPNYN KPNPNQISVN NVKAGVVNGT GAPGQSPGAG RACESCYTTQ SYQWYSWGPP NMQCRLCASC WTYWKKYGGL KMPTRLDGER PGPNRSNMSP HGLPARSSGS PKFAMKTRQA FYLHTTKLTR IARRLCREIL RPWHAARHPY LPINSAAIKA ECTARLPEAS QSPLVLKQAV RKPLEAVLRY LETHPRPPKP DPVKSVSSVL SSLTPAKVAP VINNGSPTIL GKRSYEQHNG VDGNMKKRLL MPSRGLANHG QARHMGPSRN LLLNGKSYPT KVRLIRGGSL PPVKRRRMNW IDAPDDVFYM ATEETRKIRK LLSSSETKRA ARRPYKPIAL RQSQALPPRP PPPAPVNDEP IVIED |

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| | **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:<br>• Made in Germany - from design to production - by highly experienced protein experts.<br>• Protein expressed with ALiCE® and purified by multi-step, protein-specific process to ensure correct folding and modification.<br>• These proteins are normally active (enzymatically functional) as our customers have reported (not tested by us and not guaranteed).<br>• State-of-the-art algorithm used for plasmid design (Gene synthesis).<br><br>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.<br>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.<br><br>Expression System:<br>• 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.<br>• 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!<br><br>Concentration:<br>• The concentration of our recombinant proteins is measured using the absorbance at 280nm.<br>• The protein's absorbance will be measured in several dilutions and is measured against its specific reference buffer.<br>• 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®): |

## Product Details

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| | 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.<br>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

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| Target: | MTA1 |
| Alternative Name: | MTA1 (MTA1 Products) |
| Background: | Metastasis-associated protein MTA1,FUNCTION: Transcriptional coregulator which can act as both a transcriptional corepressor and coactivator (PubMed:16617102, PubMed:17671180, PubMed:17922032, PubMed:21965678, PubMed:24413532). Acts as a component of the histone deacetylase NuRD complex which participates in the remodeling of chromatin (PubMed:16428440, PubMed:28977666). In the NuRD complex, regulates transcription of its targets by modifying the acetylation status of the target chromatin and cofactor accessibility to the target DNA (PubMed:17671180). In conjunction with other components of NuRD, acts as a transcriptional corepressor of BRCA1, ESR1, TFF1 and CDKN1A (PubMed:17922032, PubMed:24413532). Acts as a transcriptional coactivator of BCAS3, and SUMO2, independent of the NuRD complex (PubMed:21965678, PubMed:17671180, PubMed:16617102). Stimulates the expression of WNT1 by inhibiting the expression of its transcriptional corepressor SIX3 (By similarity). Regulates p53-dependent and -independent DNA repair processes following genotoxic stress (PubMed:19837670). Regulates the stability and function of p53/TP53 by inhibiting its ubiquitination by COP1 and MDM2 thereby regulating the p53-dependent DNA repair (PubMed:19837670). Plays a role in the regulation of the circadian clock and is essential for the generation and maintenance of circadian rhythms under constant light and for normal entrainment of behavior to light-dark (LD) cycles (By similarity). Positively regulates the CLOCK-BMAL1 heterodimer mediated transcriptional activation of its own transcription and the transcription of CRY1 (By similarity). Regulates deacetylation of BMAL1 by regulating SIRT1 expression, resulting in derepressing CRY1-mediated transcription repression (By similarity). With TFCP2L1, promotes establishment and maintenance of pluripotency in embryonic stem cells (ESCs) and inhibits endoderm differentiation (By similarity). |

## Target Details

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| | {ECO:0000250\|UniProtKB:Q8K4B0, ECO:0000269\|PubMed:16428440, ECO:0000269\|PubMed:16617102, ECO:0000269\|PubMed:17671180, ECO:0000269\|PubMed:17922032, ECO:0000269\|PubMed:19837670, ECO:0000269\|PubMed:21965678, ECO:0000269\|PubMed:24413532}., FUNCTION: [Isoform Short]: Binds to ESR1 and sequesters it in the cytoplasm and enhances its non-genomic responses. {ECO:0000269\|PubMed:15077195}. |
| Molecular Weight: | 80.8 kDa |
| UniProt: | Q13330 |
| Pathways: | Chromatin Binding |

## 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.<br>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 |

## Handling

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| Storage Comment: | Store at -80°C. |
| Expiry Date: | Unlimited (if stored properly) |

## Images

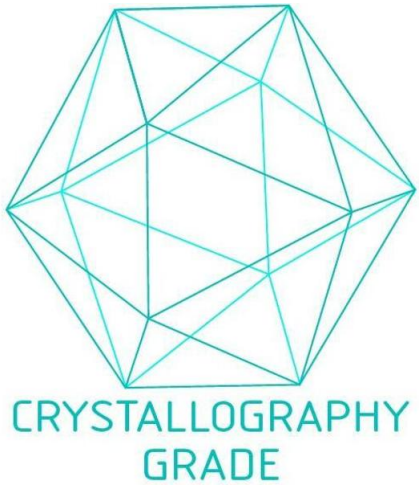


**Image 1.** „Crystallography Grade“ protein due to multi-step, protein-specific purification process