Datasheet for ABIN3136486

PRMT5 Protein (AA 2-637) (His tag)

1 Image

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Overview

Quantity:	1 mg
Target:	PRMT5
Protein Characteristics:	AA 2-637
Origin:	Mouse
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This PRMT5 protein is labelled with His tag.
Application:	Western Blotting (WB), ELISA, Crystallization (Crys), SDS-PAGE (SDS)

Product Details

Sequence:	AAMAVGGAGG SRVSSGRDLN CVPEIADTLG AVAKQGFDFL CMPVFHPRFK REFIQEPAKN RPGPQTRSDL LLSGRDWNTL IVGKLSPWIH PDSKVEKIRR NSEAAMLQEL NFGAYLGLPA FLLPLNQEDN TNLARVLTNH IHTGHHSSMF WMRVPLVAPE DLRDDVIANA PTTHTEEYSG EEKTWMWWHN FRTLCDYSKR IAVALEIGAD LPSNHVIDRW LGEPIKAAIL PTSIFLTNKK GFPVLSKVQQ RLIFRLLKLE VQFIITGTNH HSEKEFCSYL QYLEYLSQNR PPPNAYELFA KGYEDYLQSP LQPLMDNLES QTYEVFEKDP IKYSQYQQAI YKCLLDRVPE EEKETNVQVL MVLGAGRGPL VNASLRAAKQ AERRIRLYAV EKNPNAVVTL ENWQFEEWGS QVTVVSSDMR EWVAPEKADI IVSELLGSFA DNELSPECLD GAQHFLKDDG VSIPGEYTSF LAPISSSKLY NEVRACREKD RDPEAQFEMP YVVRLHNFHQ LSAPKPCFTF SHPNRDPMID NNRYCTLEFP VEVNTVLHGF AGYFETVLYR DITLSIRPET HSPGMFSWFP IFFPIKQPIT VHEGQNICVR FWRCSNSKKV WYEWAVTAPV CSSIHNPTGR SYTIGL **Sequence without tag. Tag location is at the discretion of the manufacturer. If you have a**

	special request, please contact us.
Characteristics:	• Made in Germany - from design to production - by highly experienced protein experts. • Mouse Prmt5 Protein (raised in Insect Cells) purified by multi-step, protein-specific process to ensure crystallization grade. • 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. In the unlikely event that the protein cannot be expressed or purified we do not charge anything (other companies might charge you for any performed steps in the expression process for custom-made proteins, e.g. fees might apply for the expression plasmid, the first expression experiments or purification optimization). When you order this made-to-order protein you will only pay upon receival of the correctly folded protein. With no financial risk on your end you can rest assured that our experienced protein experts will do everything to make sure that you receive the protein you ordered. 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. The concentration of the protein is calculated using its specific absorption coefficient. We use the Expasy's protparam tool to determine the absorption coefficient of each protein.
Purification:	Two step purification of proteins expressed in baculovirus infected SF9 insect cells: 1. In a first purification step, the protein is purified from the cleared cell lysate using three different His-tag capture materials: high yield, EDTA resistant, or DTT resistant. 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:	>95 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.
Sterility:	0.22 µm filtered
Endotoxin Level:	Protein is endotoxin free.
Grade:	Crystallography grade

Target Details

Target:	PRMT5
Alternative Name:	Prmt5 (PRMT5 Products)
Background:	Arginine methyltransferase that can both catalyze the formation of omega-N monomethylarginine (MMA) and symmetrical dimethylarginine (sDMA), with a preference for the formation of MMA (PubMed:15485929, PubMed:19584108, PubMed:19858291, PubMed:21917714, PubMed:23133559). Specifically mediates the symmetrical dimethylation of arginine residues in the small nuclear ribonucleoproteins Sm D1 (SNRPD1) and Sm D3 (SNRPD3), such methylation being required for the assembly and biogenesis of snRNP core particles. Methylates SUPT5H and may regulate its transcriptional elongation properties. Mono- and dimethylates arginine residues of myelin basic protein (MBP) in vitro. May play a role in cytokine-activated transduction pathways. Negatively regulates cyclin E1 promoter activity and cellular proliferation (By similarity). Methylates histone H2A and H4 'Arg-3' during germ cell development. Methylates histone H3 'Arg-8', which may repress transcription (PubMed:15485929). Methylates the Piwi proteins (PIWIL1, PIWIL2 and PIWIL4), methylation of Piwi proteins being required for the interaction with Tudor domain-containing proteins and subsequent localization to the meiotic nuage (PubMed:19584108). Methylates RPS10 (By similarity). Attenuates EGF signaling through the MAPK1/MAPK3 pathway acting at 2 levels. First, monomethylates EGFR, this enhances EGFR 'Tyr-1197' phosphorylation and PTPN6 recruitment, eventually leading to reduced SOS1 phosphorylation. Second, methylates RAF1 and probably BRAF, hence destabilizing these 2 signaling proteins and reducing their catalytic activity (PubMed:21917714). Required for induction of E-selectin and VCAM-1, on the endothelial cells surface at sites of inflammation. Methylates HOXA9. Methylates and regulates SRGAP2 which is involved in cell migration and differentiation (By similarity). Acts as a transcriptional corepressor in CRY1-mediated repression of the core circadian component PER1 by regulating the H4R3 dimethylation at the PER1 promoter (PubMed:23133559). Methylates GM130/GOLGA2, regulating Golgi ribbon formation. Methylates H4R3 in genes involved in glioblastomagenesis in a CHTOP- and/or TET1-dependent manner (By similarity). Symmetrically methylates POLR2A, a modification that allows the recruitment to POLR2A of proteins including SMN1/SMN2 and SETX. This is required for resolving RNA-DNA hybrids created by RNA polymerase II, that form R-loop in transcription terminal regions, an important step in proper transcription termination (By similarity). {ECO:0000250|UniProtKB:O14744, ECO:0000269|PubMed:15485929, ECO:0000269|PubMed:19584108, ECO:0000269|PubMed:19858291, ECO:0000269|PubMed:21917714, ECO:0000269|PubMed:23133559}.
Molecular Weight:	73.5 kDa Including tag.

Target Details

UniProt:	Q8CIG8
Pathways:	Chromatin Binding, Regulation of Muscle Cell Differentiation, Ribonucleoprotein Complex Subunit Organization, Skeletal Muscle Fiber Development

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 gurantee though.
Comment:	Protein has not been tested for activity yet. In cases in which it is highly likely that the recombinant protein with the default tag will be insoluble our protein lab may suggest a higher molecular weight tag (e.g. GST-tag) instead to increase solubility. We will discuss all possible options with you in detail to assure that you receive your protein of interest.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	100 mM NaCL, 20 mM Hepes, 10% glycerol. pH value is at the discretion of the manufacturer.
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	Unlimited (if stored properly)

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