Datasheet for ABIN3093492

MLL/KMT2A Protein (AA 2719-3969) (His tag)

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Overview

Quantity:	1 mg
Target:	MLL/KMT2A (MLL)
Protein Characteristics:	AA 2719-3969
Origin:	Human
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This MLL/KMT2A protein is labelled with His tag.
Application:	Crystallization (Crys), ELISA, SDS-PAGE (SDS), Western Blotting (WB)

Product Details

Sequence:	GVDDGTESDT SVTATTRKSS QIPKRNGKEN GTENLKIDRP EDAGEKEHVT KSSVGHKNEP KMDNCHSVSR VKTQGQDSLE AQLSSLESSR RVHTSTPSDK NLLDTYNTEL LKSDSDNNNS DDCGNILPSD IMDFVLKNTP SMQALGESPE SSSSELLNLG EGLGLDSNRE KDMGLFEVFS QQLPTTEPVD SSVSSSISAE EQFELPLELP SDLSVLTTRS PTVPSQNPSR LAVISDSGEK RVTITEKSVA SSESDPALLS PGVDPTPEGH MTPDHFIQGH MDADHISSPP CGSVEQGHGN NQDLTRNSST PGLQVPVSPT VPIQNQKYVP NSTDSPGPSQ ISNAAVQTTP PHLKPATEKL IVVNQNMQPL YVLQTLPNGV TQKIQLTSSV SSTPSVMETN TSVLGPMGGG LTLTTGLNPS LPTSQSLFPS ASKGLLPMSH HQHLHSFPAA TQSSFPPNIS NPPSGLLIGV QPPPDPQLLV SESSQRTDLS TTVATPSSGL KKRPISRLQT RKNKKLAPSS TPSNIAPSDV VSNMTLINFT PSQLPNHPSL LDLGSLNTSS HRTVPNIIKR SKSSIMYFEP APLLPQSVGG TAATAAGTST ISQDTSHLTS GSVSGLASSS SVLNVVSMQT TTTPTSSASV PGHVTLTNPR LLGTPDIGSI SNLLIKASQQ SLGIQDQPVA LPPSSGMFPQ LGTSQTPSTA AITAASSICV LPSTQTTGIT

AASPSGEADE HYQLQHVNQL LASKTGIHSS QRDLDSASGP QVSNFTQTVD APNSMGLEQN KALSSAVQAS PTSPGGSPSS PSSGQRSASP SVPGPTKPKP KTKRFQLPLD KGNGKKHKVS HLRTSSSEAH IPDQETTSLT SGTGTPGAEA EQQDTASVEQ SSQKECGQPA GQVAVLPEVQ VTQNPANEQE SAEPKTVEEE ESNFSSPLML WLQQEQKRKE SITEKKPKKG LVFEISSDDG FQICAESIED AWKSLTDKVQ EARSNARLKQ LSFAGVNGLR MLGILHDAVV FLIEQLSGAK HCRNYKFRFH KPEEANEPPL NPHGSARAEV HLRKSAFDMF NFLASKHRQP PEYNPNDEEE EEVQLKSARR ATSMDLPMPM RFRHLKKTSK EAVGVYRSPI HGRGLFCKRN IDAGEMVIEY AGNVIRSIQT DKREKYYDSK GIGCYMFRID DSEVVDATMH GNAARFINHS CEPNCYSRVI NIDGQKHIVI FAMRKIYRGE ELTYDYKFPI EDASNKLPCN CGAKKCRKFL N

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.
- Human KMT2A 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

Product Details

	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:	MLL/KMT2A (MLL)
Alternative Name:	KMT2A (MLL Products)
Background:	Histone methyltransferase that plays an essential role in early development and hematopoiesis. Catalytic subunit of the MLL1/MLL complex, a multiprotein complex that mediates both methylation of 'Lys-4' of histone H3 (H3K4me) complex and acetylation of 'Lys-16' of histone H4 (H4K16ac). In the MLL1/MLL complex, it specifically mediates H3K4me, a specific tag for epigenetic transcriptional activation. Has weak methyltransferase activity by itself, and requires other component of the MLL1/MLL complex to obtain full methyltransferase activity. Has no activity toward histone H3 phosphorylated on 'Thr-3', less activity toward H3 dimethylated on 'Arg-8' or 'Lys-9', while it has higher activity toward H3 acetylated on 'Lys-9'. Required for transcriptional activation of HOXA9. Promotes PPP1R15A-induced apoptosis. Plays a critical role in the control of circadian gene expression and is essential for the transcriptional activation mediated by the CLOCK-ARNTL/BMAL1 heterodimer. Establishes a permissive chromatin state for circadian transcription by mediating a rhythmic methylation of 'Lys-4' of histone H3 (H3K4me) and this histone modification directs the circadian acetylation at H3K9 and H3K14 allowing the recruitment of CLOCK-ARNTL/BMAL1 to chromatin (By similarity). {ECO:0000250|UniProtKB:P55200, ECO:0000269|PubMed:10490642, ECO:0000269|PubMed:12453419, ECO:0000269|PubMed:15960975, ECO:0000269|PubMed:19556245}.
Molecular Weight:	135.4 kDa Including tag.
UniProt:	Q03164
Pathways:	Warburg Effect

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:	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)

