abcam

Product datasheet

Recombinant human Dnmt3b protein ab170410

2 References 4 Images

Description

Product name	Recombinant human Dnmt3b protein
Biological activity	The specific activity of ab170410 was determined to be 525 pmol/min/mg.
Purity	> 75 % Densitometry. Affinity purified.
Expression system	Baculovirus infected Sf9 cells
Accession	Q9UBC3
Protein length	Full length protein
Animal free	No
Nature	Recombinant
Species	Human
Sequence	MKGDTRHLNGEEDAGGREDSILVNGACSDQSSDSPPILE AIRTPEIRGRR SSSRLSKREVSSLLSYTQDLTGDGDGEDGDGSDTPVMP KLFRETRTRSES PAVRTRNNNSVSSRERHRPSPRSTRGRQGRNHVDESPV EFPATRSLRRRA TASAGTPWPSPPSSYLTIDLTDDTEDTHGTPQSSSTPYAR LAQDSQQGGM ESPQVEADSGDGDSSEYQDGKEFGIGDLVWGKIKGFSW WPAMVVSWKATS KRQAMSGMRWVQWFGDGKFSEVSADKLVALGLFSQHF NLATFNKLVSYRK AMYHALEKARVRAGKTFPSSPGDSLEDQLKPMLEWAHG GFKPTGIEGLKP NNTQPVVNKSKVRRAGSRKLESRKYENKTRRRTADDSAT SDYCPAPKRLK TNCYNNGKDRGDEDQSREQMASDVANNKSSLEDGCLSC GRKNPVSFHPLF EGGLCQTCRDRFLELFYMYDDDGYQSYCTVCCEGRELLL CSNTSCCRCFC VECLEVLVGTGTAAEAKLQEPWSCYMCLPQRCHGVLRR RKDWNVRLQAFF TSDTGLEYEAPKLYPAIPAARRRPIRVLSLFDGIATGYLVLK ELGIKVGK

YVASEVCEESIAVGTVKHEGNIKYVNDVRNITKKNIEEWGP
FDLVIGGSP
CNDLSNVNPARKGLYEGTGRLFFEFYHLLNYSRPKEGDD
RPFFWMFENVV
AMKVGDKRDISRFLECNPVMIDAIKVSAAHRARYFWGNLP
GMNRPVIASK
NDKLELQDCLEYNRIAKLKKVQTITTKSNSIKQGKNQLFPV
VMNGKEDVL
WCTELERIFGFPVHYTDVSNMGRGARQKLLGRSWSVPVI
RHLFAPLKDYF ACE

Predicted molecular weight	138 kDa including tags
Amino acids	1 to 853
Tags	proprietary tag N-Terminus

Specifications

Our **Abpromise guarantee** covers the use of **ab170410** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Applications	SDS-PAGE Functional Studies
Form	Liquid

Preparation and Storage

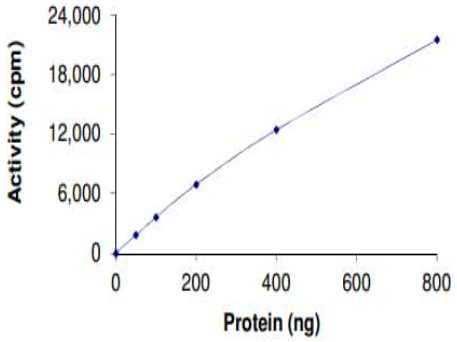
Stability and Storage	Shipped on dry ice. Upon delivery aliquot and store at -80ºC. Avoid freeze / thaw cycles. pH: 7.50 Constituents: 0.31% Glutathione, 0.002% PMSF, 0.004% DTT, 0.79% Tris HCl, 0.003% EDTA, 25% Glycerol (glycerin, glycerine), 0.29% Sodium chloride This product is an active protein and may elicit a biological response in vivo, handle with caution.

General Info

Function	Required for genome wide de novo methylation and is essential for the establishment of DNA methylation patterns during development. DNA methylation is coordinated with methylation of histones. May preferentially methylates nucleosomal DNA within the nucleosome core region. May function as transcriptional co-repressor by associating with CBX4 and independently of DNA methylation. Seems to be involved in gene silencing (By similarity). In association with DNMT1 and via the recruitment of CTCFL/BORIS, involved in activation of BAG1 gene expression by modulating dimethylation of promoter histone H3 at H3K4 and H3K9. Isoforms 4 and 5 are probably not functional due to the deletion of two conserved methyltransferase motifs.
Tissue specificity	Ubiquitous; highly expressed in fetal liver, heart, kidney, placenta, and at lower levels in spleen, colon, brain, liver, small intestine, lung, peripheral blood mononuclear cells, and skeletal muscle. Isoform 1 is expressed in all tissues except brain, skeletal muscle and PBMC, 3 is ubiquitous, 4 is expressed in all tissues except brain, skeletal muscle, lung and prostate and 5 is detectable only in testis and at very low level in brain and prostate.
Involvement in disease	Defects in DNMT3B are a cause of immunodeficiency-centromeric instability-facial anomalies

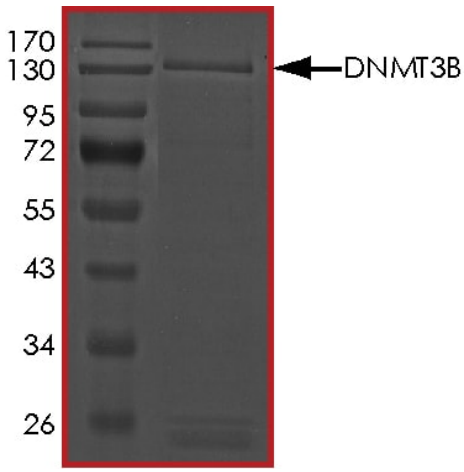
	syndrome (ICF) [MIM:242860]. ICF is a rare autosomal recessive disorder characterized by a variable immunodeficiency, mild facial anomalies, and centromeric heterochromatin instability involving chromosomes 1, 9, and 16. ICF is biochemically characterized by hypomethylation of CpG sites in some regions of heterochromatin.
Sequence similarities	Belongs to the C5-methyltransferase family. Contains 1 ADD domain. Contains 1 GATA-type zinc finger. Contains 1 PHD-type zinc finger. Contains 1 PWWP domain.
Domain	The PWWP domain is essential for targeting to pericentric heterochromatin.
Post-translational modifications	Sumoylated.
Cellular localization	Nucleus.

Images



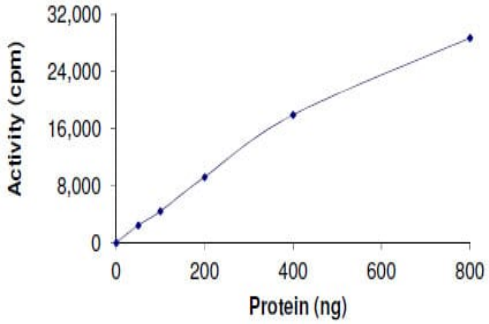
Functional Studies - Recombinant human Dnmt3b protein (ab170410)

The specific activity of Dnmt3b (ab170410) was determined to be 450 nmol/min/mg as per activity assay protocol



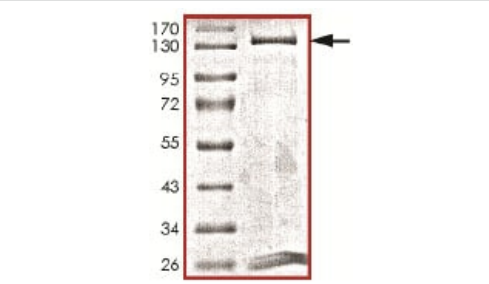
SDS-PAGE - Recombinant human Dnmt3b protein (ab170410)

SDS PAGE analysis of ab170410



Functional Studies - Recombinant human Dnmt3b protein (ab170410)

Sample Methyltransferase Activity plot using ab170410.



SDS-PAGE - Recombinant human Dnmt3b protein (ab170410)

SDS-PAGE analysis of ab170410.

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