

Recombinant human Dnmt3a protein ab170408

[1 References](#) [5 Images](#)

Description

Product name	Recombinant human Dnmt3a protein
Biological activity	The specific activity of ab170408 was determined to be 250 pmol/min/mg.
Purity	> 70 % Densitometry. Affinity purified.
Expression system	Baculovirus infected Sf9 cells
Accession	<u>Q9Y6K1</u>
Protein length	Full length protein
Animal free	No
Nature	Recombinant
Species	Human
Sequence	MPAMPSSGPGDTSSSAAEREEDRKDGEEQEEPRGKEE RQEPSTTARKVGR PGRKRKHPPVESGDTPKDPAVISKSPSMAQDSGASELLP NGDLEKRSEPO PEEGSPAGGQKGGAPAEEGEGAAETLPEASRAVENGCCCT PKEGRGAPAEAG KEQKETNIESMKMEGSRGRLRGGLGWESSLRQRPMPRL TFQAGDPYYISK RKRDEWLARWKREAEKAKVIAGMNAVEENQGPGESQK VEEASPPAVQQP TDPASPTVATTPEPVGSDAGDKNATKAGDDEPEYEDGR GFGIGELVWGKL RGFSWWPGRIVSWWMTGRSRAAEGTRWVMWFGDGKF SVVCVEKLMPLSSF CSAFHQATYNKQPMYRKAIYEV LQVASSRAGKLFVCHD SDESDTAKAVE VQNKPMIEWALGGFQPSGPKGLEPPEEEKNPYKEYVTDM WVEPEAAAYAP PPPAKKPRKSTAEKPKVKEIIDERTRELVYEV RQKCRNIE DICISCGSL NVTLEHPLFVGGMCQNCKNCFLECA YQYDDDDGYQSYCTI CCGGREVL MCG NNNCCRCFCVECVDLLVGP GAAQA AIKEDPWNCY MCGH KGTYGLLRRED

WPSRLQMFFANNHDQEFDPPKVYPVPAEKRPKPIRVLSL
FDGIATGLLVL
KDLGIQVDRIYASEVCEDSITVGMVRHQGKIMYVGDVRSVT
QKHIQEWGP
FDLVIGGSPCNDLSVNPARKGLYEGTGRLFFEFYRLLHDA
RPKEGDDRP
FFWLFENVVAMGVSDKRDISRFLSNPVMIDAKEVSAAH
RARYFWGNLPG
MNRPLASTVNDKLELQECLEHGRIAKFSKVRTITTRSNSIK
QGKDQHFPV
FMNEKEDILWCTEMERVFGFPVHYTDVSNMSRLARQRL
GRSWSVPVIRH LFAPLKEYFACV

Predicted molecular weight	162 kDa including tags
Amino acids	1 to 912
Tags	proprietary tag N-Terminus

Specifications

Our **Abpromise guarantee** covers the use of **ab170408** in the following tested applications.

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

Applications	Functional Studies SDS-PAGE
Form	Liquid

Preparation and Storage

Stability and Storage	Shipped on dry ice. Upon delivery aliquot and store at -80°C. 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.
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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. It modifies DNA in a non-processive manner and also methylates non-CpG sites. May preferentially methylate DNA linker between 2 nucleosomal cores and is inhibited by histone H1. Plays a role in paternal and maternal imprinting. Required for methylation of most imprinted loci in germ cells. Acts as a transcriptional corepressor for ZNF238. Can actively repress transcription through the recruitment of HDAC activity.
Tissue specificity	Highly expressed in fetal tissues, skeletal muscle, heart, peripheral blood mononuclear cells, kidney, and at lower levels in placenta, brain, liver, colon, spleen, small intestine and lung.
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.

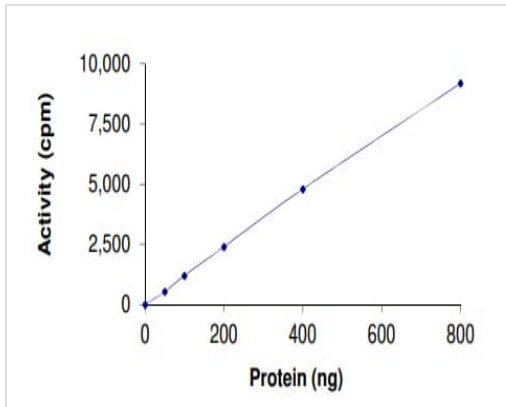
Post-translational modifications

Sumoylated; sumoylation disrupts the ability to interact with histone deacetylases (HDAC1 and HDAC2) and repress transcription.

Cellular localization

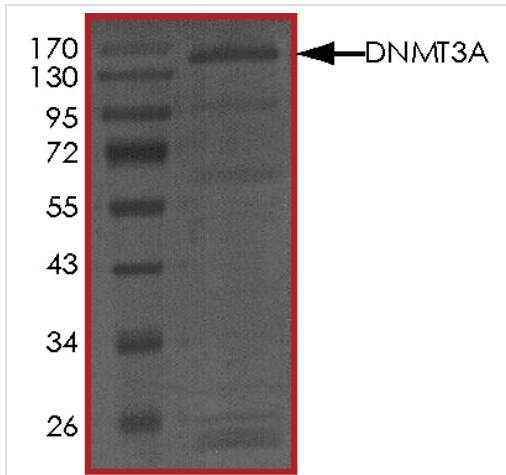
Nucleus. Cytoplasm. Accumulates in the major satellite repeats at pericentric heterochromatin.

Images



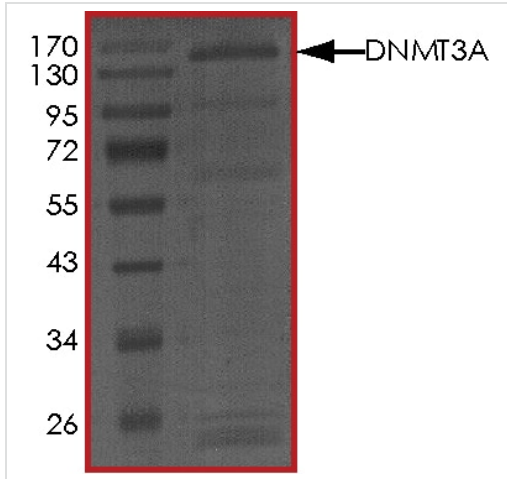
The specific activity of Dnmt3a (ab170408) was determined to be 215 nmol/min/mg as per activity assay protocol

Functional Studies - Recombinant human Dnmt3a protein (ab170408)



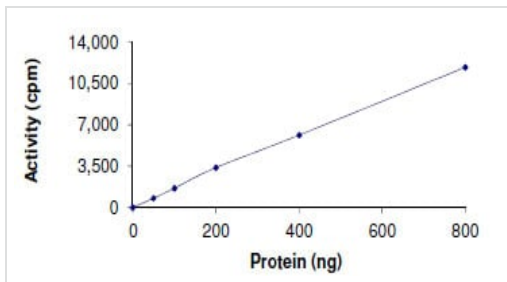
SDS PAGE analysis of ab170408

SDS-PAGE - Recombinant human Dnmt3a protein (ab170408)



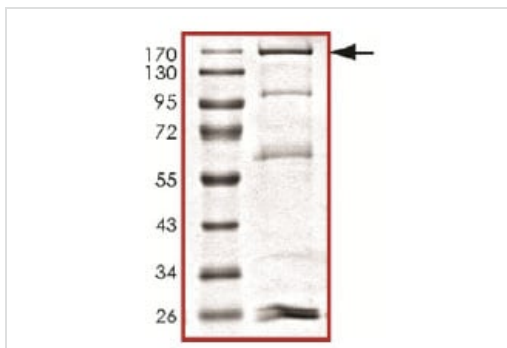
SDS PAGE analysis of ab170408

SDS-PAGE - Recombinant human Dnmt3a protein (ab170408)



Sample Methyltransferase Activity plot using ab170408.

Functional Studies - Recombinant human Dnmt3a protein (ab170408)



SDS-PAGE analysis of ab170408.

SDS-PAGE - Recombinant human Dnmt3a protein (ab170408)

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