

Product datasheet for **RC223206**

DNMT3B (NM_006892) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	DNMT3B (NM_006892) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	DNMT3B
Synonyms:	ICF; ICF1; M.HsaIIIB
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC223206 representing NM_006892
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGAAGGGAGACACCAGGCATCTCAATGGAGAGGAGGACGCCGGGGAGGGAAGACTCGATCCTCGTCA
 ACGGGGCCTGCAGCGACCAGTCCTCCGACTCGCCCAATCCTGGAGGCTATCCGCACCCGGAGATCAG
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 CACCTTCTCGCCCTCTGAAGGACTACTTTGCATGTGAA

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC223206 representing NM_006892
 Red=Cloning site Green=Tags(s)

MKGDTRHLNGEEDAGGREDSSILVNGACSDQSSDSPPILEAIRTPEIRGRSSRLSKREVSSLLSYTQDL
 TGDGDGEDGDGSDTPVMPKLFRETRTRSESPAVRTRNNNSVSSRERHRPSRSTRGRQGRNHVDESPVEF
 PATRSLRRRATASAGTPWSPSSSYLTIDLDDTETHGTPQSSSTPYARLAQDSQQGGMESPVQVEADSG
 DGDSSEYQDGKEFGIGDLVWGKIKGFSWWPAMVVSWKATSKRQAMSGMRVWVQWFGDGKGFSEVSADKLVAL
 GLFSQHFNLATFNKLVSYRKAMYHALEKARVRAGKTFPSSPGDSEDQLKPMLEWAHGGFKPTGIEGLKP
 NNTQPVVNKSIVRRAGSRKLESRYENKTRRRATDSDYCPAPKRLKTNVYNGKDRGEDDQSRQ
 ASDVANNKSSLEDGCLSCGRKNPVSFHPLFEGGLCQTCRDRFLELFMYDDDGYSYCTVCEGRELLLC
 SNTSCRCFCVECLEVLVGTGTAAEAKLQEPWSCYMCLPQRCHGVLRRRKDWNVRLQAFFTSDTGLEEYA
 PKLYAIPAARRRPIRVLSLFDGIATGYLVKELGIKVGKYVASEVCEESIAVGTVKHEGNIKYVNDVRN
 ITKKNIEEWGPFDLVIGGSPCNDLSNVNPKGLYEGTGRLFFEFYHLLNYSRPKEGDRPFVWFENVV
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 HLFAPLKDYFACE

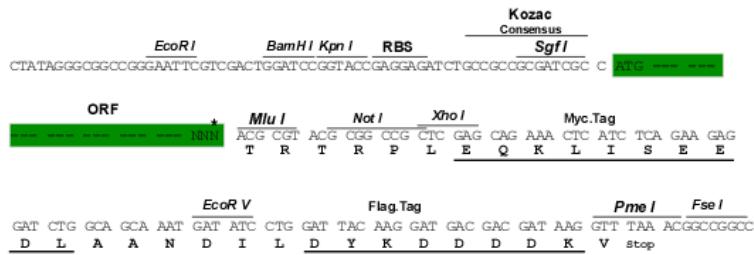
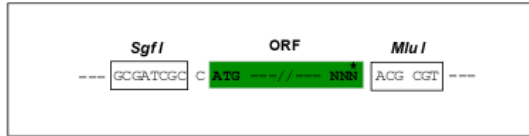
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mg3165_a05.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:

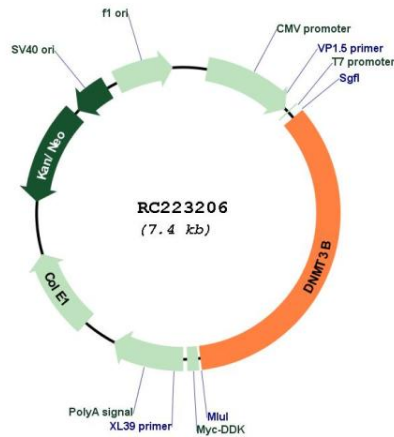


* The last codon before the Stop codon of the ORF

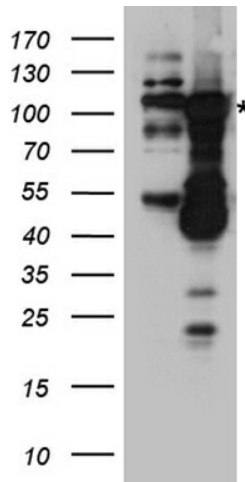
ACCN:	NM_006892
ORF Size:	2559 bp
OTI Disclaimer:	<p>Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.</p> <p>The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. More info</p>
OTI Annotation:	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
Components:	The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).
Reconstitution Method:	<ol style="list-style-type: none"> 1. Centrifuge at 5,000xg for 5min. 2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA. 3. Close the tube and incubate for 10 minutes at room temperature. 4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom. 5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.
RefSeq:	NM_006892.4
RefSeq Size:	4353 bp
RefSeq ORF:	2562 bp
Locus ID:	1789
UniProt ID:	Q9UBC3
Cytogenetics:	20q11.21
Domains:	PWWP, DNA_methylase
Protein Families:	Druggable Genome, Embryonic stem cells, Induced pluripotent stem cells, Stem cell - Pluripotency
Protein Pathways:	Cysteine and methionine metabolism, Metabolic pathways
MW:	95.8 kDa

Gene Summary:

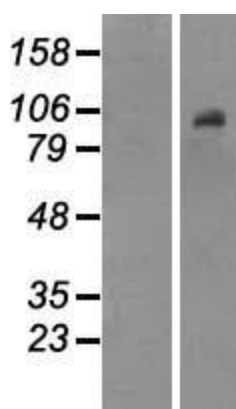
CpG methylation is an epigenetic modification that is important for embryonic development, imprinting, and X-chromosome inactivation. Studies in mice have demonstrated that DNA methylation is required for mammalian development. This gene encodes a DNA methyltransferase which is thought to function in de novo methylation, rather than maintenance methylation. The protein localizes primarily to the nucleus and its expression is developmentally regulated. Mutations in this gene cause the immunodeficiency-centromeric instability-facial anomalies (ICF) syndrome. Eight alternatively spliced transcript variants have been described. The full length sequences of variants 4 and 5 have not been determined. [provided by RefSeq, May 2011]

Product images:


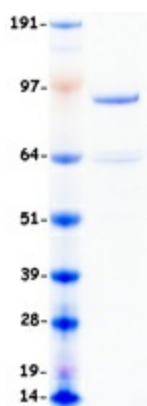
Circular map for RC223206



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY DNMT3B (Cat# RC223206, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-DNMT3B antibody (Cat# [TA890112]). Positive lysates [LY406229] (100ug) and [LC406229] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY416333]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC223206 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified DNMT3B protein (Cat# [TP323206]). The protein was produced from HEK293T cells transfected with DNMT3B cDNA clone (Cat# RC223206) using MegaTran 2.0 (Cat# [TT210002]).