

## Product datasheet for **RG223418**

### **DNMT3B (NM\_175849) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	DNMT3B (NM_175849) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	DNMT3B
Synonyms:	ICF; ICF1; M.HsallIB
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG223418 representing NM\_175849  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGAAGGGAGACACCAGGCATCTCAATGGAGAGGAGGACGCCGGGGAGGGAAGACTCGATCCTCGTCA  
 ACGGGGCTGCAGCGACCAGTCCTCCGACTCGCCCCAACTCTGGAGGCTATCCGCACCCGGAGATCAG  
 AGGCCGAAGATCAAGCTCGGACTCTCCAAGAGGGAGGTGCCAGTCTGCTAAGCTACACACAGGACTTG  
 ACAGGCGATGGCGACGGGAAGATGGGGATGGCTCTGACACCCAGTCATGCCAAAGCTCTCCGGGAAA  
 CCAGGACTCGTTCAGAAAGCCAGCTGTCCGAACCGAAATAACAACAGTGTCTCCAGCCGGGAGAGGCA  
 CAGGCCTCCCCACGTTCCACCCGAGGCCGGCAGGGCCGCAACCATGTGGACGAGTCCCCCGTGGAGTTC  
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 CTACGCCCGCTAGCCCAGGACAGCCAGCAGGGGGGCATGGAGTCCCGCAGGTGGAGGCAGACAGTGG  
 ATGGAGACAGTTCAGAGTATCAGGATGGGAAGGAGTTTGAATAGGGGACCTCGTGTGGGAAAGATCA  
 AGGGCTTCTCCTGGTGGCCCGCCATGGTGGTGTCTTGAAGGCCACCTCCAAGCGACAGGCTATGTCTGG  
 CATGCGGTGGGTCCAGTGGTTGGCGATGGCAAGTTCTCCGAGGTCTCTGCAGACAACTGGTGGCACTG  
 GGGCTGTTAGCCAGCACTTTAATTTGGCCACCTTCAATAAGCTCGTCTCCTATCGAAAAGCCATGTACC  
 ATGCTCTGGAGAAAGCTAGGGTGCAGCTGGCAAGACCTCCCCAGCAGCCCTGGAGACTCATTGGAGGA  
 CCAGCTGAAGCCCATGTTGGAGTGGGCCACGGGGCTTCAAGCCACTGGGATCGAGGGCTCAAACCC  
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 CCGCACCAAGCGCTCAAGACAATTGCTATAACAACGGCAAAGACCGAGGGGATGAAGATCAGAGCCG  
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 GGCACAGCGGCCGAGGCCAAGCTTCAGGAGCCCTGGAGCTGTTACATGTGTCTCCCGCAGCGCTGCATG  
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 CGTGAGGAACATCACAAAGAAAAATATTGAAGAATGGGGCCCATTTGACTTGGTATTGGCGGAAGCCCA  
 TGCAACGATCTCTCAAATGTGAATCCAGCCAGGAAAGGCTGTATGAGGGTACAGGCCGGCTCTTCTTCG  
 AATTTTACCACCTGCTGAATTACTCACGCCCAAGGAGGGTGTGACCGGCCGTTCTTCTGGATGTTTGA  
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 ATTGATGCCATCAAAGTTTCTGTGCTCACAGGGCCGATACTTCTGGGGCAACCTACCCGGGATGAACA  
 GGATCTTTGGCTTCTGTGCTACACAGACGTGTCCAACATGGGCCGTTGGTCCCGCCAGAAGCTGCT  
 GGAAGGTCTGGAGCGTGCCTGCATCCGACACCTCTTCGCCCTCTGAAGGACTACTTTGCATGTGAA

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:** >RG223418 representing NM\_175849  
 Red=Cloning site Green=Tags(s)

MKGDTRHLNGEEDAGGREDSSILVNGACSDQSSDSPPILEAIRTPEIRGRSSRLSKREVSSLLSYQDL  
 TGDGDGEDGSDTPVMPKLFRETRTRSESPAVRTRNNNSVSSRERHRPSRSTRGRQGRNHVDESPVEF  
 PATRSLRRRATASAGTPWPSPSSYLIDLTDDTEDTHGTPQSSSTPYARLAQDSQQGGMESPVQVEADSG  
 DGDSSEYQDGKEFGIGDLVWGKIKGFSWWPAMVVSWKATSKRQAMSGMRWVQWFGDGKGFSEVSADKLVAL  
 GLFSQHFNLATFNKLVSYRKAMYHALEKARVRAGKTFPSSPGDSLEDQLKPMLEWAHGGFKPTGIEGLKP  
 NNTQPENKTRRRRTADDSATSDYCPAPKRLKTNCYNNGKDRGEDQSQREQMASDVANNKSSLEDGCLSCGR  
 KNPVSFHPLFEGGLCQTCRDRFLELFYMYDDDGYSYCTVCCGRELLECSNTSCCRFCVCECLEVLVGT  
 GTAAEAKLQEPWSCYMCLPQRCHGVLRRRKDWNVRLQAFFTSDTGLEYEAPKLYAIPAARRRPIRVL  
 FDGIATGYLVLKELGIKVGKYVASEVCEESI AVGTVKHEGNIKYVNDVRNITKKNIEEWGPFDLVIGGSP  
 CNDLSNVNPARKGLYEGTGRLF FEFYHLLNYSRPKEGDDRPFFWFMENVVAMKVGDKRDISRFLCNPVM  
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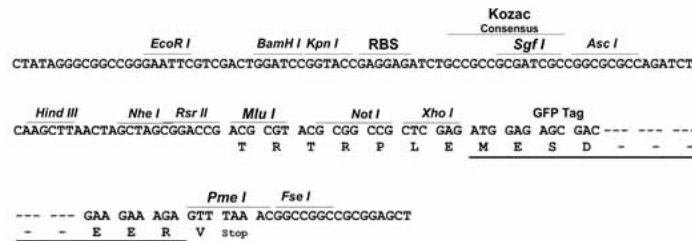
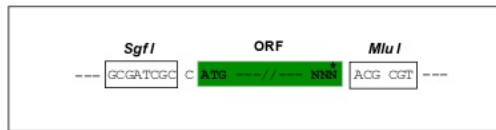
TRTRPLE - GFP Tag - V

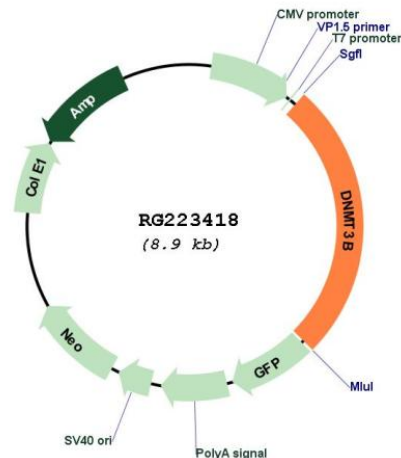
**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shutting:



**Plasmid Map:**


**ACCN:** NM\_175849

**ORF Size:** 2310 bp

**OTI Disclaimer:** 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](#)

**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:**

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\\_175849.2](#)

**RefSeq Size:** 4104 bp

**RefSeq ORF:** 2313 bp

**Locus ID:** 1789

<b>UniProt ID:</b>	<u>Q9UBC3</u>
<b>Cytogenetics:</b>	20q11.21
<b>Protein Families:</b>	Druggable Genome, Embryonic stem cells, Induced pluripotent stem cells, Stem cell - Pluripotency
<b>Protein Pathways:</b>	Cysteine and methionine metabolism, Metabolic pathways
<b>Gene Summary:</b>	<p>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]</p>