

## Product datasheet for **RG226414**

### DNMT1 (NM\_001130823) Human Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** DNMT1 (NM\_001130823) Human Tagged ORF Clone  
**Tag:** TurboGFP  
**Symbol:** DNMT1  
**Synonyms:** ADCADN; AIM; CXXC9; DNMT; HSN1E; m.Hsal; MCMT  
**Mammalian Cell Selection:** Neomycin  
**Vector:** pCMV6-AC-GFP (PS100010)  
**E. coli Selection:** Ampicillin (100 ug/mL)  
**ORF Nucleotide Sequence:** >RG226414 representing NM\_001130823  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGATCGCC**

ATGCCGGCGGTACCGCCCCAGCCCGGGTCCCCACACTGGCCGTCCCGGCCATCTCGCTGCCCGACGATG  
 TCCGCAGGCGGCTCAAAGATTTGGAAAGAGACAGCTTAACAGAAAAGGAATGTGTGAAGGAGAAATTGAA  
 TCTCTTGACGAATTTCTGCAAACAGAAATAAAGAATCAGTTATGTGACTTGGAAACCAATTACGTAAA  
 GAAGAATTATCCGAGGAGGGCTACCTGGCTAAAGTCAAATCCCTTTTAAATAAAGATTTGCCTTGGAGA  
 ACGGTGCTCATGCTTACAACCGGAAGTGAATGGACGTCTAGAAAACGGGAACCAAGCAAGAAGTGAAGC  
 CCGTAGAGTGGGAATGGCAGATGCCAACAGCCCCCAAACCCCTTTCCAACCTCGCACGCCAGGAGG  
 AGCAAGTCCGATGGAGAGGCTAAGCGTTCAAGAGACCCTCCTGCCTCAGCCTCCCAAGTAACTGGGATTA  
 GAGCTGAACCTTACCTAGCCCCAGGATTACAAGGAAAAGCACCAGGCAAACCACCATCACATCTCATT  
 TGCAAAGGGCCCTGCCAAACGGAAACCTCAGGAAGAGTCTGAAAGAGCCAAATCGGATGAGTCCATCAAG  
 GAAGAAGACAAAGACCAGGATGAGAAGAGACGTAGAGTTACATCCAGAGAACGAGTTGCTAGACCGCTTC  
 CTGCAGAAGAACCTGAAAGAGCAAAATCAGGAACGCGCACTGAAAAGGAAGAAGAAGAGATGAAAAAGA  
 AGAAAAGAGACTCCGAAGTCAAACCAAAGAACCAACACCCAAACAGAACTGAAGGAGGACCCGGACAGA  
 GAAGCCAGGGCAGGCGTGCAGGCTGACGAGGACGAAGATGGAGACGAGAAAGATGAGAAGAACACAGAA  
 GTCAACCCAAAGATCTAGCTGCCAAACGGAGGCCGAAGAAAAAGAACCTGAAAAAGTAAATCCACAGAT  
 TTCTGATGAAAAAGACGAGGATGAAAAGGAGGAGAAGAGACGCAAAACGACCCCAAGAACCAACGGAG  
 AAAAAATGGCTCGCGCCAAAACAGTCATGAACCTCCAAGACCCACCCTCCCAAGTGCATTAGTGGGGC  
 AGTACCTGGACGACCCTGACCTCAAATATGGGCAGCACCCACCAGACGCGGTGGATGAGCCACAGATGCT  
 GACAAATGAGAAGCTGTCCATCTTTGATGCCAACGAGTCTGGCTTTGAGAGTTATGAGGCGCTTCCCCAG  
 CACAACTGACCTGCTTCAGTGTGACTGTAAGCACGGTACCTGTGTCCATCGACACCCGCTCATCG  
 AGAAGAATATCGAACTCTCTTTCTGTTTCAGCAAAACCAATCTATGATGATGACCCATCTCTTGAAGG  
 TGTTGTTAATGGCAAAAATCTTGGCCCCATAAATGAATGGTGGATCACTGGCTTTGATGGAGGTGAAAAG



[View online »](#)

GCCCTCATCGGCTTCAGCACCTCATTGCGCAATACATTCTGATGGATCCCAGTCCCAGATGCGCCCA  
 TATTTGGGCTGATGCAGGAGAAGATCTACATCAGCAAGATTGTGGTGGAGTTCCTGCAGAGCAATCCGA  
 CTCGACCTATGAGGACCTGATCAACAAGATCGAGACCACGGTTCCTCCTTCTGGCCTCAACTTGAACCGC  
 TTCACAGAGGACTCCCTCCTGCGACACGCGCAGTTTGTGGTGGAGCAGGTGGAGAGTTATGACGAGGCCG  
 GGGACAGTGATGAGCAGCCATCTTCTGACACCCTGCATGCGGGACCTGATCAAGCTGGCTGGGGTAC  
 GCTGGGACAGAGCGAGCCAGGCGAGGCGGCAGACCATCAGGCATTCTACCAGGAGAAGGACAGGGGA  
 CCCACGAAAGCCACCACCAAGCTGGTCTACCAGATCTTCGATACTTCTTCGACAGCAAATGAAA  
 AGGATGACAGAGAAGACAAGGAGAAGCGCTTTAAGCGCCGGCAGTGTGGGCTCTGTGAGGTGTGACGA  
 GCCTGAGTGTGGGAAATGTAAGCCTGCAAGGACATGGTTAAATTTGGTGGCAGTGGACGGACAAGCAG  
 GCTTGCCAAGAGCGGAGGTGTCCCAATATGGCCATGAAGGAGGCAGATGACGATGAGGAAGTCGATGATA  
 ACATCCCAGAGATGCCGTACCCAAAAAATGCACCAGGGGAAGAAGAAGAAACAGAACAAGAAATCGCAT  
 CTCTTGGGTGGGAGAAGCCGTCAAGACTGATGGGAAGAAGAGTTACTATAAGAAGGTGTGCATTGATGCG  
 GAAACCCTGGAAGTGGGGACTGTGTCTCTGTTATTCCAGATGATTCCTCAAACCCTGTATCTAGCAA  
 GGGTCACGGCGCTGTGGGAGGACAGCAGCAACGGGCAGATGTTTACGCCCACTGGTTCTGCGCTGGGAC  
 AGACACAGTCTCGGGCCACGTGGACCCTCTGGAGCTGTTCTTGGTGGATGAATGTGAGGACATGCAG  
 CTTTCATATATCCACAGCAAAGTAAAAGTCATCTACAAAGCCCTCCGAAAACCTGGGCCATGGAGGGAG  
 GCATGGATCCCAGTCCCTGCTGGAGGGGGACGACGGGAAGACCTACTTCTACCAGCTGTGGTATGATCA  
 AGACTACGCGAGATTCGAGTCCCCTCAAAAACCCAGCCAACAGAGGACAACAAGTTCAAATTTCTGTGTG  
 AGCTGTGCCCGTCTGGCTGAGATGAGGCAAAAAGAAATCCCCAGGGTCTGGAGCAGCTCGAGGACCTGG  
 ATAGCCGGGTCTCTACTACTCAGCCACCAAGAACGGCATCCTGTACCGAGTTGGTGTGTTGTGTACCT  
 GCCCCTGAGGCCTTACGTTCAACATCAAGCTGTCCAGTCCCCTGAAACGCCACGGAAGGAGCCCGTG  
 GATGAGGACCTGTACCCAGAGCACTACCGGAAATACTCCGACTACATCAAAGGCAGCAACCTGGATGCC  
 CTGAGCCCTACGAATTTGGCCGGATCAAAGAGATCTTCTGTCCCAAGAAGAGCAACGGCAGGCCAATGA  
 GACTGACATCAAATCCGGGTCAACAAGTTCTACAGGCCTGAGAACACCCACAAGTCCACTCCAGCGAGC  
 TACCACGCAGACATCAACCTGCTCTACTGGAGCGACGAGGAGGCCGTGGTGGACTTCAAGCTGTGACGG  
 GCCGCTGCACCGTGGAGTATGGGGAGGACCTGCCCGAGTGCCTCCAGGTGTAATCCATGGGCGGCCCAA  
 CCGCTTACTTCTCGAGGCCTATAATGCAAAGAGCAAAGCTTTGAAGATCCTCCCAACCATGCCCGT  
 AGCCCTGGAAACAAGGGGAGGGCAAGGGAAAAGGGAAGGGCAAGCCCAAGTCCCAAGCCTGTGAGCCGA  
 GCGAGCCAGAGATAGAGATCAAGCTGCCAAGCTGCGGACCTGGATGTGTTTTCTGGTGCAGGGGGTT  
 GTCGGAGGGATTCCACCAAGCAGGCATCTCTGACACGCTGTGGGCCATCGAGATGTGGACCTGCGGCC  
 CAGGGCTTCCGGTGAACAACCCCGCTCCACAGTGTTCACAGAGGACTGCAACATCCTGCTGAAGCTGG  
 TCATGGCTGGGGAGACCACAACCTCCCGCGCCAGCGGCTGCCCAAGAAGGGAGAGCTGGAGATGCTGTG  
 CGGCGGGCCGCCCTGCCAGGGCTTCAGCGGCATGAACCGCTTCAATTCGCGCACCTACTCCAAGTCAAA  
 AACTCTCTGGTGGTTTTCTTCTCAGCTACTGCGACTACTACCGCCCGGTTCTTCTCCTGGAGAATG  
 TCAGGAACCTTTGTCTCCTTCAAGCGCTCCATGGTCTGAAAGTCAACCTCCGCTGCCTGGTCCGCATGGG  
 CTATCAGTGCACCTTCGGCGTGTGACGCGGTCAGTACGGCGTGGCCAGACTAGGAGGCGGGCCATC  
 ATCCTGGCCGCGGCCCTGGAGAGAAGCTCCCTCTGTTCCCGGAGCCACTGCACGTGTTTGTCTCCCGG  
 CCTGCCAGCTGAGCGTGGTGGTGGATGACAAGAAGTTTGTGAGCAACATAACCAAGTTGAGCTCGGGTCC  
 TTTCCGGACCATCACGGTGCAGACACGATGTCGACCTGCCGAGGTGCGGAATGGAGCCTCGGACTG  
 GAGATCTCTACAACGGGGAGCCTCAGTCTGGTTCAGAGGCAGCTCCGGGGCGCACAGTACCAGCCCA  
 TCCTCAGGGACCACATCTGTAAGGACATGAGTGCATTGGTGGCTGCCCGCATGCGGCACATCCCCTTGGC  
 CCCAGGGTCCAGCTGGCGCATCTGCCAACATCGAGGTGCGGCTCTCAGACGGCACCATGGCCAGGAAG  
 CTGCGGTATACCCACCATGACAGGAAGAACGGCCGACGAGCTCTGGGGCCCTCCGTGGGTCTGCTCCT  
 GCGTGGAAAGCCGCAAGCCTGCGACCCCGCAGCCAGGCAGTTCAACACCCTCATCCCCTGGTGCCTGCC  
 CCACACCGGAACCGGCACAACCACTGGGCTGGCCTCTATGGAAGGCTCGAGTGGGACGGCTTCTCAGC  
 ACAACCGTACCAACCCCGAGCCATGGGAAGCAGGGCCGCTGCTCCACCCAGAGCAGCACCCTGTGG  
 TGAGCGTGCAGGAGTGTGCCGCTCCAGGGCTTCCCTGACACCTACCGGCTCTTCGGCAACATCCTGGA  
 CAAGCACCGGCAGGTGGGCAATGCCGTGCCACCGCCCTGGCCAAAGCCATTGGCTTGGAGATCAAGCTT  
 TGTATGTTGGCCAAAGCCGAGAGAGTGCCTCAGCTAAAATAAAGGAGGAGGAAGCTGCTAAGGAC

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

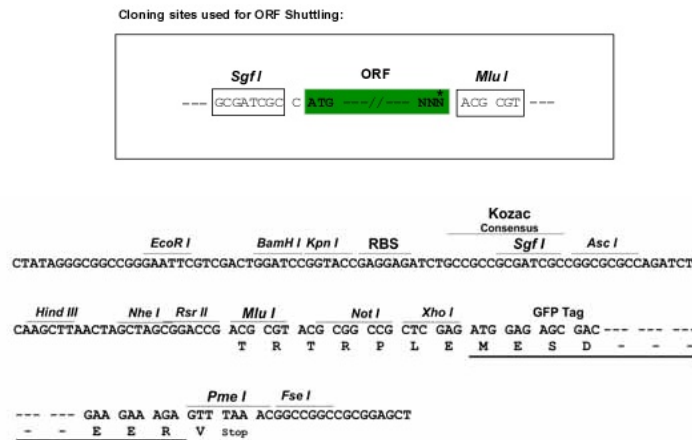
Protein Sequence: >RG226414 representing NM\_001130823  
 Red=Cloning site Green=Tags(s)

MPARTAPARVPTLAVPAISLPDDVRRRLKDLERDSL TEKECVKEKLNLLHEFLQTEIKNQLCDLETCLRK  
 EELSEEGYLAKVKSLLNKDLSENGAHAYNREVNGLRLENGNQARSEARRVGMADANSPPKPLSKPRTPRR  
 SKSDGEAKRSRDPASASQVTGIRAEPSPSPRITRKRSTQTTITSHFAKGPAAKRPQEESERAKSDES  
 EEDKDQDEKRRRVTSRERVARPLPAEPPERAKSGTRTEKEEERDEKEEKRLRSQTKEPTPKQKLKEEPDR  
 EARAGVQADEDEGDGDEKDEKHKRSQPKDLAAKRRRPEEKEPEKVNQIISDEKDEDEKEEKRRTTPKEPTE  
 KKMARAKTVMNSKTHPPKCIQCGQYLDDPDLKYQHPPDAVDEPQMLTNEKLSIFDANESGFESYEALPQ  
 HKLTCFSVYCKHGHLCPIIDTGLIEKNIELFFSGSAKPIYDDDPSELEGGVNGKNLGPINEWITGDFGGEK  
 ALIGFSTFAEYILMDPSPEYAPIFGLMQEKIYISKIVVEFLQSNDSSTYEDLINKIETTVPSSGLNLNR  
 FTEDSLLRHAQFVVEQVESYDEAGDSDEQPIFLTPCMRDLIKLAGVTLGQRRQAARRQTIHSTREKDRG  
 PTKATTTKLVYQIFDFFAEQIEKDDREDKENAFKRRRCGVCEVCQQPECGKCKACKDMVKFGGSGRSKQ  
 ACQERRCPNMAMKEADDDEEVDNIPEMPSPKMHQGKKKQKNRISWVGEAVKTDGKKSYYKVCIDA  
 ETLEVGDCVSVIPDDSSKPLYLARVTALWEDSSNGQMFHAHWFCAGTDTVLGATSDPLELFLVDECEDMQ  
 LSYIHSKVVIYKAPSENWAMEGMDPESLLEGGDGKTYFYQLWYDQDYARFESPKTQPTEDNKFKFCV  
 SCARLAEMRQKEIPRVLEQLEDLDSRVLYYSATKNGILYRVGDGVYLPPEAFTFNIKLSSPVKRPKEPV  
 DEDLYPEHYRKYSYIKGSNLDAPEPYRIGRIKEIFCPKKSNGRPNETDIKIRVNFYRPENTHKSTPAS  
 YHADINLLYWSDEEAVVDFKAVQGRCTVEYGEDLPECVQVYSMGGPNRFYFLEAYNAKSKSFEDPPNHR  
 SPGNKGGKGGKGGKPKSQACEPSEPEIEIKLPLRRTLDFVSGCGGLSEGFHQAGISDTLWAIEMWDPA  
 QAFRLNPNPGSTVFTEDCNILLKVMAGETTSNRGQRLPQKGDVEMLCGGPPCQGFSGMNRFNRSRTYSKFK  
 NSLVVSVFLSYCDYRPRFFLLENVRNFVSKRSMVLKLTLRCLVRMGYQCTFGVLQAGQYGAQTRRRAI  
 ILAAAPGEKLLPFPEPLHVFAPRACQLSVVDDKKFVSNITRLSSGPFRTITVRDMSDLPEVRNGASAL  
 EISYNGEPQSWFQRQLRGAQYQPLRDHICKDMSALVAARMRHIPLAPGSDWRDLPNIEVRLSDGTMARK  
 LRYTHDRKNGRSSGALRGVCSVEAGKACDPAARQFNTLIPWCLPHTGNRHNHWAGLYGRLEWDGFFS  
 TTVTNPEPMGKQGRVLHPEQHRVSVRECARSQGFPDITYRLFNGILDKHRQVGNVPPPLAKAIGLEIKL  
 CMLAKARESASAKIKEEEAAKD

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:

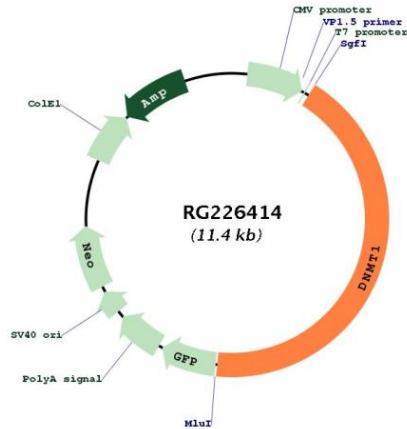


ACCN: NM\_001130823

<b>ORF Size:</b>	4896 bp
<b>OTI Disclaimer:</b>	<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 <a href="mailto:custsupport@origene.com">custsupport@origene.com</a> 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. <a href="#">More info</a></p>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"> <li>1. Centrifuge at 5,000xg for 5min.</li> <li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li> <li>3. Close the tube and incubate for 10 minutes at room temperature.</li> <li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li> <li>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.</li> </ol>
<b>RefSeq:</b>	<a href="#">NM_001130823.3</a>
<b>RefSeq Size:</b>	5425 bp
<b>RefSeq ORF:</b>	4899 bp
<b>Locus ID:</b>	1786
<b>UniProt ID:</b>	<a href="#">P26358</a>
<b>Cytogenetics:</b>	19p13.2
<b>Protein Families:</b>	Druggable Genome, Transcription Factors
<b>Protein Pathways:</b>	Cysteine and methionine metabolism, Metabolic pathways

**Gene Summary:**

This gene encodes an enzyme that transfers methyl groups to cytosine nucleotides of genomic DNA. This protein is the major enzyme responsible for maintaining methylation patterns following DNA replication and shows a preference for hemi-methylated DNA. Methylation of DNA is an important component of mammalian epigenetic gene regulation. Aberrant methylation patterns are found in human tumors and associated with developmental abnormalities. Variation in this gene has been associated with cerebellar ataxia, deafness, and narcolepsy, and neuropathy, hereditary sensory, type IE. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Jan 2016]

**Product images:**


Circular map for RG226414