

Product datasheet for **RN202766**

Dnmt3l (NM_001003964) Rat Untagged Clone

Product data:

Product Type: Expression Plasmids
Product Name: Dnmt3l (NM_001003964) Rat Untagged Clone
Tag: Tag Free
Symbol: Dnmt3l
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
Cell Selection: Neomycin
Fully Sequenced ORF: >RN202766 representing NM_001003964
Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGGTTCCCGGGAGACACCTTCTCTGCTCTAAGACCCATGAAACCTTGAACCTGGAGACTCCGGAGA
GCTCTAGCACTGACCCTGACAGTCCCCTGGAAGCAATGGCCGAAATCAGCCCCAGATCTGAAAGAGGA
AGACAGCATGGATATGGTACTGGAAGACTCCAAGGAGCCTTAACCCCTCCTCACCGCCGACAGGCAGA
GAGGTCATCAGGTACGAAGTCAACGTGAACCAGCGGAACATCGAAGACATCTGCCTCTGTTGCGGATCTC
TCCAGGTGTACGCTCAGCACCCCTTGTTTGAGGGGGAATTTGTGCCCGTGTAAAGGACAAGTTCCTGGA
GACCTCTTCTATACGACGAGGATGGACACCAGAGCTACTGTACCATCTGCTGCTCCGGGCATACCCTG
TTCATCTGCGAGAGCCCCGACTGTACCAGATGCTACTGTTTCGAGTGTGTGGATATCCTGGTGGGCCCCG
GGACCTCGGAGCGCATCAATGCCATGGCCTGCTGGGTTTGCTTCTGTGCCTGCCTTTCTCCCGGAGCGG
ACTGCTGCAGAGGCGCAAGAAGTGGCGTACCAGCTGAAGGCCTCCATGACCGAGAGGGGCAAGCCCT
GTGGAGATATAACAAGACTGTGTCTGCATGAAAAGACAGCCAGTGAAGGTGCTGAGTCTTTTTGGGAATA
TTGATAAAGAAGTAAAGAGTTTGGGCTTTTGGAAAGCAGTTCTGGTTCTGAGGGAGGAACGCTGAAGTA
CGTGGAAGATGTACCAATGTCTGTGAGGAGAGAAGTGGAGAAATGGGGTCCCTTTGACTTGGTGTATGGC
TCAACCCAGCCCCCTAGGCTATTCTGTGACCGCTGTCCCTGGCTGGTACATGTTCCAGTTCACCGGATCC
TGAGTATGCCCGGCTCGCAAGACAGCCAGCAGCCCTTCTTCTGGATATTTGTGGACAATCTGCTGCT
GACTGAAGATGACCAAGAGACAAGTGTCCGCTTCTTCCAGACAGAGGCTGTGACCTCCAGGATGTCCGC
GGCAGAGTCCCTCAGAATGTATGAGGGTGTGGAGCAACATCCAGGGCTGAAGAGCAAGCACGCGGACC
TGACCCCTAAGGAAGAGCAGTCTCTGCAAACCAAGTCAAGCCAGAAGCAAGCTGGCCGCCAGAAAGT
TGACTCCCTAGTGAAGTACTGCCTTCTCCCCCTGAGAGAGTACTCAAGTATTTTTCTCAGAAGTCACTT
CCTCTTAG

ACGCGTACGCGGCCGCTCGAGCAGAAAACCTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-MluI



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ACCN:	NM_001003964
Insert Size:	1269 bp
OTI Disclaimer:	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
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:	<u>NM_001003964.1</u> , <u>NP_001003964.1</u>
RefSeq Size:	1689 bp
RefSeq ORF:	1269 bp
Locus ID:	309680
UniProt ID:	<u>Q1LZ50</u>
Cytogenetics:	20p12
Gene Summary:	<p>Catalytically inactive regulatory factor of DNA methyltransferases that can either promote or inhibit DNA methylation depending on the context. Essential for the function of DNMT3A and DNMT3B: activates DNMT3A and DNMT3B by binding to their catalytic domain. Acts by accelerating the binding of DNA and S-adenosyl-L-methionine (AdoMet) to the methyltransferases and dissociates from the complex after DNA binding to the methyltransferases (By similarity). Recognizes unmethylated histone H3 lysine 4 (H3K4me0) and induces de novo DNA methylation by recruitment or activation of DNMT3 (By similarity). Plays a key role in embryonic stem cells and germ cells. In germ cells, required for the methylation of imprinted loci together with DNMT3A. In male germ cells, specifically required to methylate retrotransposons, preventing their mobilization. Plays a key role in embryonic stem cells (ESCs) by acting both as an positive and negative regulator of DNA methylation. While it promotes DNA methylation of housekeeping genes together with DNMT3A and DNMT3B, it also acts as an inhibitor of DNA methylation at the promoter of bivalent genes. Interacts with the EZH2 component of the PRC2/EED-EZH2 complex, preventing interaction of DNMT3A and DNMT3B with the PRC2/EED-EZH2 complex, leading to maintain low methylation levels at the promoters of bivalent genes. Promotes differentiation of ESCs into primordial germ cells by inhibiting DNA methylation at the promoter of RHOX5, thereby activating its expression (By similarity).[UniProtKB/Swiss-Prot Function]</p>