

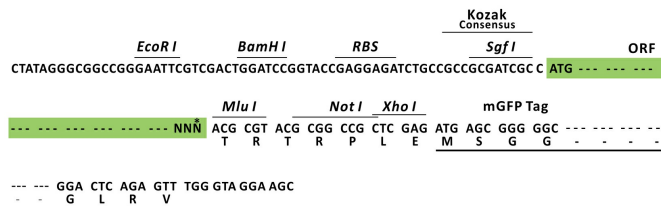
Product datasheet for RR202766L4

Dnmt3l (NM_001003964) Rat Tagged Lenti ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Dnmt3l (NM_001003964) Rat Tagged Lenti ORF Clone
Tag:	mGFP
Symbol:	Dnmt3l
Mammalian Cell Selection:	Puromycin
Vector:	pLenti-C-mGFP-P2A-Puro (PS100093)
E. coli Selection:	Chloramphenicol (34 ug/mL)
ORF Nucleotide Sequence:	The ORF insert of this clone is exactly the same as(RR202766).
Restriction Sites:	SgfI-MluI
Cloning Scheme:	

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF.



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RefSeq ORF: 1269 bp

Locus ID: 309680

UniProt ID: [Q1LZ50](#)

Cytogenetics: 20p12

Gene Summary: 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 a 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]