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Product datasheet for MG227091

Ehmt1 (NM_001012518) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Ehmt1 (NM_001012518) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Ehmt1
Synonyms:	9230102N17Rik; D330003E03; Eu-HMTase1; GLP; GLP1; KMT1D; mKIAA1876
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)

ORF Nucleotide Sequence:

>MG227091 representing NM_001012518
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
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ATGGCCGCCGCTGATGCTGAGCAGGCAGTTCTGGCCAAGCAAGAGACCAAGCAGGATTGCTGCATGAAAA
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GGAATTCTGTCTTCCCAGACAGAAAATGAAGGGCTGGCCAGTGGTCCGGATGTGCTGGGGACGGATGGCC
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TGTCGGCACTCAAGCGCAGCCCTGGCCCAGAGGCAAGCCAGTGCAGCCCAGGAGCCTCAGGAGAATGGCC
TTCCAGATACCAGCTCTGCAGCCGCTGCTGACCCCCTA

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>MG227091 representing NM_001012518
Red=Cloning site Green=Tags(s)

MAAADAEQAVLAKQETKQDCCMKTELLREDTPMAADEGSTEKQEGETPMAADGETNGSCEKSGDPSHLNA
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PNILTSSLPGHAAKTLPGGASKCRTLSALPQTPTTAPTVPGEGSADTEDRKPTASGTDVRVHRARKTMPK
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GNVSRFINHHCEPNLVPVRVFMSHQDLRFPRIAFFSTRLIQAGEQLGFDYGERFWDVKGKLFSCRCGSSK
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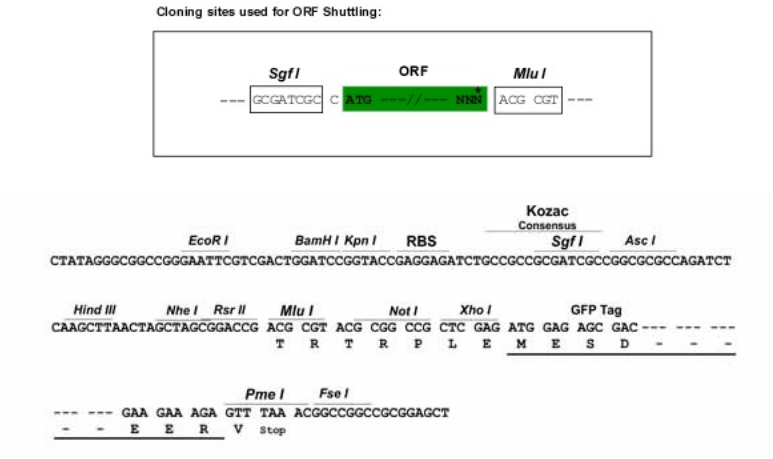
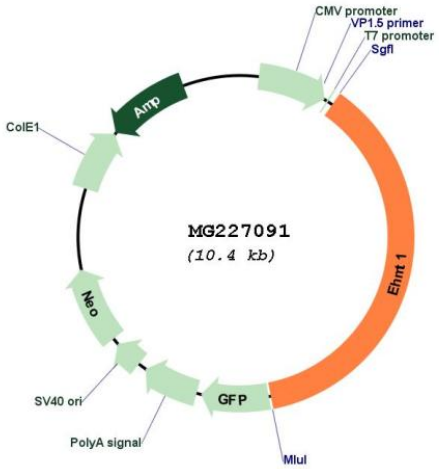
TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN:	NM_001012518
ORF Size:	3888 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_001012518.3, NP_001012536.2
RefSeq Size:	5091 bp
RefSeq ORF:	3891 bp
Locus ID:	77683
UniProt ID:	Q5DW34
Cytogenetics:	2 A3

Gene Summary: Histone methyltransferase that specifically mono- and dimethylates 'Lys-9' of histone H3 (H3K9me1 and H3K9me2, respectively) in euchromatin. H3K9me represents a specific tag for epigenetic transcriptional repression by recruiting HP1 proteins to methylated histones. Also weakly methylates 'Lys-27' of histone H3 (H3K27me). Also required for DNA methylation, the histone methyltransferase activity is not required for DNA methylation, suggesting that these 2 activities function independently. Probably targeted to histone H3 by different DNA-binding proteins like E2F6, MGA, MAX and/or DP1. During G0 phase, it probably contributes to silencing of MYC- and E2F-responsive genes, suggesting a role in G0/G1 transition in cell cycle. In addition to the histone methyltransferase activity, also methylates non-histone proteins: mediates dimethylation of 'Lys-373' of p53/TP53.[UniProtKB/Swiss-Prot Function]