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# Product datasheet for MC212048

## Prmt6 (NM_178891) Mouse Untagged Clone

### Product data:

| | |
|---|---|
| **Product Type:** | Expression Plasmids |
| **Product Name:** | Prmt6 (NM_178891) Mouse Untagged Clone |
| **Tag:** | Tag Free |
| **Symbol:** | Prmt6 |
| **Synonyms:** | AW124876; BB233495; Hrmt1l6 |
| **Mammalian Cell Selection:** | Neomycin |
| **Vector:** | pCMV6-Entry (PS100001) |
| **E. coli Selection:** | Kanamycin (25 ug/mL) |

**Fully Sequenced ORF:**

>MC212048 representing NM_178891
Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGTCGCTGAGCAAGAAAAGAAAGCTTGAGTCGGGGGACAGCGGAGGCGCCGGCGCCGGAGGGGAGGGAG
CCGAGGAGGAAAATGGCGGGGAGCAGGAGGCGGCCCCGCCACGACCCCGGAGGACCAAGAGCGAGCGGGA
CCAGCTGTACTACGAGTGCTACTCCGACGTCTCGGTCCACGAGGAGATGATCGCCGACCAGGTCCGCACC
GAAGCCTACCGCTTAGGCATCCTGAAGAACTGGGCCGCGCTGCGAGGCAAGACGGTGCTGGACGTGGGCG
CGGGCACCGGCATTCTCAGCATCTTCTGTGCCCAGGCCGGGGCACGGCGCGTGTACGCGGTGGAGGCCAG
CGCCATCTGGCAACAGGCCCGGGAGGTGGTGCGGCTCAACGGGTTGGAGGACCGCGTGCACGTCCTGCCG
GGCCCGGTGGAGACCGTGGAGCTGCCGGAGCGAGTGGACGCCATCGTCAGCGAGTGGATGGGCTACGGAC
TTCTGCACGAGTCCATGCTGAGCTCCGTGCTCCACGCGCGGACCAAATGGCTGAAGGAGGGCGGTCTCCT
CCTGCCAGCTTCCGCGGAGCTCTTCGTGGCCCCGATTAGCGACCAGATGCTCGAGTGGCGTCTGGGTTTC
TGGAGCCAGGTGAAGCAGCACTATGGCGTGGATATGAGCTGCATGGAGAGCTTCGCCACGCGCTGCCTCA
TGGGCCATTCGGAGATCGTGGTGCAGGATCTGTCCGGAGAGGACGTGCTGGCCCGGCCGCAGCGCTTTGC
CCAGCTCGAGCTGGCCCGAGCCGGCCTGGAGCAGGAGCTGGAGGCTGGTGTGGGCGGGCGCTTCCGCTGC
AGCTGCTATGGTTCCGCGCCTCTACATGGTTTCGCCGTCTGGTTTCAAGTGACCTTTCCCGGAGGGGACT
CGGAGAAACCTCTGGTGCTGTCCACCTCGCCTTTTCACCCGGCCACCCACTGGAAGCAGGCGCTCCTCTA
CTTGAACGAGCCGGTGCCGGTGGAACAAGATACGGACATTTCCGGAGAGATCACCCTGCTGCCCTCCCCG
GACAACCCCCGGCGTCTGCGCATACTTCTGCGCTACAAAGTGGGAGACCATGAGGAAAAGACCAAAGACT
TTGCCATGGAGGACTGA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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| | |
|---|---|
| **Restriction Sites:** | SgfI-MluI |
| **ACCN:** | NM_178891 |
| **Insert Size:** | 1137 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:** | 1. Centrifuge at 5,000xg for 5min.<br>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.<br>3. Close the tube and incubate for 10 minutes at room temperature.<br>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.<br>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. |
| **Note:** | Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required. |
| **RefSeq:** | NM_178891.5, NP_849222.3 |
| **RefSeq Size:** | 2475 bp |
| **RefSeq ORF:** | 1137 bp |
| **Locus ID:** | 99890 |
| **UniProt ID:** | Q6NZB1 |
| **Cytogenetics:** | 3 F3 |

**Gene Summary:**

Arginine methyltransferase that can catalyze the formation of both omega-N monomethylarginine (MMA) and asymmetrical dimethylarginine (aDMA), with a strong preference for the formation of aDMA (PubMed:22904064, PubMed:26070566). Preferentially methylates arginyl residues present in a glycine and arginine-rich domain and displays preference for monomethylated substrates (By similarity). Specifically mediates the asymmetric dimethylation of histone H3 'Arg-2' to form H3R2me2a (By similarity). H3R2me2a represents a specific tag for epigenetic transcriptional repression and is mutually exclusive with methylation on histone H3 'Lys-4' (H3K4me2 and H3K4me3) (By similarity). Acts as a transcriptional repressor of various genes such as HOXA2, THBS1 and TP53 (PubMed:22904064). Repression of TP53 blocks cellular senescence (PubMed:22904064). Also methylates histone H2A and H4 'Arg-3' (H2AR3me and H4R3me, respectively). Acts as a regulator of DNA base excision during DNA repair by mediating the methylation of DNA polymerase beta (POLB), leading to the stimulation of its polymerase activity by enhancing DNA binding and processivity. Methylates HMGA1. Regulates alternative splicing events. Acts as a transcriptional coactivator of a number of steroid hormone receptors including ESR1, ESR2, PGR and NR3C1. Promotes fasting-induced transcriptional activation of the gluconeogenic program through methylation of the CRTC2 transcription coactivator (PubMed:24570487). Methylates GPS2, protecting GPS2 from ubiquitination and degradation (PubMed:26070566).[UniProtKB/Swiss-Prot Function]
Transcript Variant: This variant (1) represents the shorter transcript, is intronless and encodes the functional protein.