

Product datasheet for **MC229469**

Ehmt2 (NM_001286575) Mouse Untagged Clone

Product data:

Product Type: Expression Plasmids
Product Name: Ehmt2 (NM_001286575) Mouse Untagged Clone
Tag: Tag Free
Symbol: Ehmt2
Synonyms: Bat8; D17Ert710e; G9a; KMT1C; NG36
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
Cell Selection: Neomycin
Fully Sequenced ORF: >MC229469 representing NM_001286575
Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**GCGATCGCC**

ATGGCGGGCGGGCGGGAGCTGCTGCGGGCGGGCCGCCGAGGGGAGGCCCCCGCTGAGATGGGGGCGC
TGCTGCTGGAGAAGGAGCCCGAGGAGCCGCCGAGAGAGTTCATAGCTCTTTGGGGACACCCCTCAGAG
TGAGGAGACCCCTCCCAAGGCCAACCCGACTCCTTGGAGCCTGCCGGCCCTCTCTCCGGCTCTGTC
ACTGTCACCGTCGCGCATGAGGGGGCTGACACCCCTGTCGGGGCCGCATCACTCATCGGGGACGAACCCG
AGAGCCTGGAGGGAGATGGGGTTCGCATCGTGCTGGGCCATGCCACAAAGTCGTTCCCTCTTCCCCAG
CAAGGGGGGTGCCTGTCCAGTCGGGCCAAAATGTCAATGACAGGGGCGAGAAAGTCGCCCCCTCGGTC
CAGAGTTTGGCCATGAGGCTGTTGAGCATGCCCGGGGCCAGGGAGCTGCAACTGCTGGGCTGAACCT
CTCCGGCAACAACTGCCGCCAGGAGGGGCGCCAAAGTGCACCGAGCCGGAAACCATGTCCAAACC
TAGCAACGGACAGCCTCCAATCCCTGAGAAGCGGCCCTGAAGTCCAGCATTTCCGCATGAGTGATGAC
ATGCATCTGGGAAGGTGACTTCAGATGTGGCCAAAAGGAGGAAGCTGAAGTCTGGTGCCTGTCCGAGG
ACTTGGGCTCTGCCGGGGCTCAGGAGATAAATCCTGGAGAAGGAGAGCCAGGCCCTGGAGGAGTG
GGAGACGGTGGTGGCGATGACTTCAGCCTGTACTATGATGCGTACTCTGTGGATGAGCGGTGGACTCT
GACAGCAAGTCTGAAGTGAAGCTCTAGCTGAACAGTTGAGTGAGGAGGAGGAGGAAGAGGAGGAAG
AAGAAGAAGAGGAGGAGGAGGAGGAAGAGGAGGAGGAAGAAGAGGACGAGGAGTCCGGCAATCAGTC
AGACAGGAGCGGTTCTAGTGGCCGGCGCAAGGCCAAGAAGAAATGGCGGAAAGACAGCCCGTGGGTGAAG
CCATCTAGAAAACGGCGGAAACGAGAGCCTCCGAGGGCCAAGGAGCAAGAGGAGTGAATGGTGTGGGT
CCTCAGGGCCAGTGAGTACATGGAGGTTCTCTGGGTCCTGGAGCTGCCAGCGAGGGGACCCTCTC
CCCCAACACGCTGGGTCTCCAATGACACGTCTTCACTGGAGACAGAACGCGGTTTGGAGAGCTGCC
CTCTGCAGCTGCCGCATGGAGGCTCCCAAGATTGACCGCATCAGCGAGAGAGCAGGGCACAAAGTGCATGG
CCACAGAGAGTGTGGATGGAGAGCTCCTGGGCTGCAATGCTGCCATCCTTAAGCGGGAGACCATGCGGCC
GTCTAGCCCGTGGCGCTGATGGTGTCTGTGAGGCCATCGAGCCCGCATGGTCAAGCACCATTGCTGC
CCGGGCTGCGGCTACTTCTGCACAGCGGCACCTTCTGGAATGCCACCCGACTTTCGTGTAGCTCACC



GCTTCCATAAGGCCTGCGTATCCCAGCTCAATGGGATGGTCTTCTGTCCCCACTGTGGAGAGGATGCCTC
 AGAGGCCAGGAGGTGACCATTCTCGGGCGATGGGGGAACACCCCAATTGGCACCGCAGCTCCTGCT
 CTGCCACCCCTGGCACATGATGCCCCAGGGCGAGCGGATACCTCCCAGCCTAGCGCCCAATGCGAGGGC
 ATGGAGAGCCGCGGCCCGCCCTGTGATCCCCGGGTGACACCATCGACAGCTCAGGGCCTTCACTGAC
 TCTGCCTAATGGGGGTGCTCTCCGCTGTGGGTGCCCCAGGGCCGGCAGGGAAGCCCTGGAAAAA
 GCCTTGGTCATCCAGGAGTCTGAGAGGCGGAAGAAGCTGCGATTCCACCCACGGCAGCTGTACCTGTCGG
 TGAAGCAGGGGGAGCTGCAGAAGGTGATCCTTATGCTGTTAGACAACCTGGACCCCAACTCCAGAGCGA
 CCAGCAGAGCAAGCGCACGCCCTGCACGCGGCCGCCAGAAGGGTTCGGTAGAGATCTGTCATGTGCTG
 CTGCAGGCAGGAGCCAACATCAATGCCGTAGATAAGCAACAACGCACGCCACTAATGGAGGCCGTGGTGA
 ACAACCACCTGGAGGTGGCACGCTACATGGTGCAGTTAGGTGGCTGTGTCTACAGCAAGGAAGAGGATGG
 CTCCACCTGTCTACATCATGCAGCCAAAATTGGGAACTTGAAATGGTCAGCCTGCTACTGAGCACAGGA
 CAGGTGGACGTCAATGCCAGGACAGTGGGGCTGGACGCCATCATCTGGGCAGCCGAGCACAAGCACA
 TCGATGTGATTTCGTATGCTGCTGACCCGGGTGCCGATGTCACCCTGACTGACAATGAGGAAAACATCTG
 CCTGCACTGGGCCTCCTCACGGGTAGTCCGCCATCGCTGAGGTCTTCTGAATGCCAGTGTGATCTC
 CATGCTGTCAACTACCATGGGGACAGCCCTGCACATAGCCGCCAGGGAGAGCTACCATGACTGTGTTT
 TGTGTTCTCTGCTCGTGGAGCCAACCCGAGCTTCGGAACAAAGAAGGAGACACGGCATGGGATCTGAC
 CCCAGAGCGCTCTGATGTGTGGTTTGCAGCTGCAGCTCAATCGAAAAGCTTAGGCTTGGGGTAGGGAACCGG
 GCTGTCCGACCCGAGAAGATCATCTGCCGGGACGTAGCCCGAGGCTATGAGAATGTACCCATCCCCTGTG
 TCAATGGTGTGGATGGGGAGCCGTGCCCGAGGACTACAAGTACATCTCTGAGAACTGCGAGACATCGAC
 CATGAACATCGACCGCAACATCACCCATCTGCAGCACTGCACGTGTGGATGACTGCTCCAGCTCCAAT
 TGCCTATGTGGTCAGCTCAGTATCCGATGCTGGTATGACAAGGACGGGCGGCTGCTCCAGGAGTTTAA
 AGATCGAGCCCCCTGATCTTTGAGTGAACCAGGCATGCTCCTGCTGGAGAAGCTGCAAGAACCAGCT
 GGTGCAGAGCGGCATCAAGGTACGGCTGCAGCTACCCGACTGCCAAGATGGGCTGGGGGTCCGAGCC
 TTGCAGACCATCCCCAGGGCAGTTCATCTGCGAGTATGTAGGAGAGCTGATCTCTGATGCCGAGGCTG
 ATGTGAGAGAGGATGATTCTTACCTCTTCGATTTAGATAACAAGGATGGCGAGGTTTACTGCATTGATGC
 CCGTTACTATGGCAACATCAGCCGATTCATTAACCACCTGTGTGACCCCAACATCATCCCTGTCCGGTT
 TTCATGCTGCACCAAGATCTACGGTTCCACGCATTGCCCTTCTCAGCTCCAGGGACATCCGGACTGGGG
 AGGAGCTGGGCTTTGACTACGGTGACCGATTCTGGGACATCAAGAGCAAGTATTTACCTGCCAGTGTGG
 CTCTGAGAAGTGAAGCATTACGCGGAGGCCATCGCCCTGGAGCAGAGCCGCTGGCCCGGCTGGACCCC
 CACCCGGAGCTGCTCCCTGACCTCAGCTCCCTGCCCCCATCAACACCTGA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

- Restriction Sites:** SgfI-MluI
- ACCN:** NM_001286575
- Insert Size:** 3621 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).
- OTI Annotation:** Clone contains native stop codon, and expresses the complete ORF without any c-terminal tag.
- 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_001286575.1](#), [NP_001273504.1](#)

RefSeq Size: 3907 bp

RefSeq ORF: 3621 bp

Locus ID: 110147

UniProt ID: [Q9Z148](#)

Cytogenetics: 17 18.45 cM

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 mediates monomethylation of 'Lys-56' of histone H3 (H3K56me1) in G1 phase, leading to promote interaction between histone H3 and PCNA and regulating DNA replication. 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. May also methylate histone H1. In addition to the histone methyltransferase activity, also methylates non-histone proteins: mediates dimethylation of 'Lys-373' of p53/TP53. Also methylates CDYL, WIZ, ACIN1, DNMT1, HDAC1, ERCC6, KLF12 and itself.[UniProtKB/Swiss-Prot Function]

Transcript Variant: This variant (4) has an alternate 5' terminal exon, which includes the 5' coding sequence, compared to variant 1. The resulting isoform (d) has a shorter and distinct N-terminus, compared to isoform a.