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Product datasheet for MC223836

Ehmt2 (NM_147151) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Ehmt2 (NM_147151) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Ehmt2
Synonyms:	Bat8; D17Ertd710e; G9a; KMT1C; NG36
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

Fully Sequenced ORF:

>MC223836 representing NM_147151
Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGCGGCGGCGGCGGGAGCTGCTGCGGCGGCGGCCGCCGAGGGGGAGGCCCCCGCTGAGATGGGGGCGC
TGCTGCTGGAGAAGGAGCCCCGAGGAGCCGCCGAGAGAGTTCATAGCTCTTTGGGGGACACCCCTCAGAG
TGAGGAGACCCTTCCCAAGGCCAACCCCGACTCCTTGGAGCCTGCCGGCCCCTCCTCTCCGGCCTCTGTC
ACTGTCACCGTCGGCGATGAGGGGGCTGACACCCCTGTCGGGGCCGCATCACTCATCGGGGACGAACCCG
AGAGCCTGGAGGGAGATGGGGGTCGCATCGTGCTGGGCCATGCCACAAAGTCGTTCCCCTCTTCCCCCAG
CAAGGGGGGTGCCTGTCCCAGTCGGGCCAAAATGTCAATGACAGGGGCAGGAAAGTCGCCCCCCTCGGTC
CAGAGTTTGGCCATGAGGCTGTTGAGCATGCCCGGGGCCCAGGGAGCTGCAACTGCTGGGCCTGAACCCT
CTCCGGCAACAACTGCCGCCCAGGAGGGGCAGCCCAAAGTGCACCGAGCCCGGAAAACCATGTCCAAACC
TAGCAACGGACAGCCTCCAATCCCTGAGAAGCGGCCCCCTGAAGTCCAGCATTTCCGCATGAGTGATGAC
ATGCATCTGGGGAAGGTGACTTCAGATGTGGCCAAAAGGAGGAAGCTGAACTCTGGTAGCCTGTCCGAGG
ACTTGGGCTCTGCCGGGGGCTCAGGAGATATAATCCTGGAGAAGGGAGAGCCCAGGCCCCTGGAGGAGTG
GGAGACGGTGGTGGGCGATGACTTCAGCCTGTACTATGATGCGTACTCTGTGGATGAGCGGGTGGACTCT
GACAGCAAGTCTGAAGTCGAAGCTCTAGCTGAACAGTTGAGTGAGGAGGAGGAGGAGGAAGAGGAGGAAG
AAGAAGAAGAGGAGGAGGAGGAAGAGGAGGAGGAAGAAGAGGACGAGGAGTCGGGCAATCAGTC
AGACAGGAGCGGTTCTAGTGGCCGGCGCAAGGCCAAGAAGAAATGGCGGAAAGACAGCCCGTGGGTGAAG
CCATCTAGAAAACGGCGGAAACGAGAGCCTCCGAGGGCCAAGGAGCCAAGAGGGGTCTCCAATGACACGT
CTTCACTGGAGACAGAACGCGGGTTTGAGGAGCTGCCCCTCTGCAGCTGCCGCATGGAGGCTCCCAAGAT
TGACCGCATCAGCGAGAGAGCAGGGCACAAGTGCATGGCCACAGAGAGTGTGGATGGAGAGCTCCTGGGC
TGCAATGCTGCCATCCTTAAGCGGGAGACCATGCGGCCGTCTAGCCGCGTGGCGCTGATGGTGCTCTGTG
AGGCCCATCGAGCCCGCATGGTCAAGCACCATTGCTGCCCGGGCTGCGGCTACTTCTGCACAGCGGGCAC
CTTCCTGGAATGCCACCCCGACTTTCGTGTAGCTCACCGCTTCCATAAGGCCTGCGTATCCCAGCTCAAT

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GGGATGGTCTTCTGTCCCCACTGTGGAGAGGATGCCTCAGAGGCCCAGGAGGTGACCATTCCTCGGGGCG
ATGGGGGAACACCCCCAATTGGCACCGCAGCTCCTGCTCTGCCACCCCTGGCACATGATGCCCCAGGGCG
AGCGGATACCTCCCAGCCTAGCGCCCGAATGCGAGGGCATGGAGAGCCGCGGCGCCCGCCCTGTGATCCC
CTGGCTGACACCATCGACAGCTCAGGGCCTTCACTGACTCTGCCTAATGGGGGCTGCCTCTCCGCTGTGG
GTCTGCCCCCAGGGCCGGGCAGGGAAGCCCTGGAAAAAGCCTTGGTCATCCAGGAGTCTGAGAGGCGGAA
GAAGCTGCGATTCCACCCACGGCAGCTGTACCTGTCGGTGAAGCAGGGGGAGCTGCAGAAGGTGATCCTT
ATGCTGTTAGACAACCTGGACCCCAACTTCCAGAGCGACCAGCAGAGCAAGCGCACGCCCCTGCACGCGG
CCGCCCAGAAGGGGTCGGTAGAGATCTGTCATGTGCTGCTGCAGGCAGGAGCCAACATCAATGCCGTAGA
TAAGCAACAACGCACGCCACTAATGGAGGCCGTGGTGAACAACCACCTGGAGGTGGCACGCTACATGGTG
CAGTTAGGTGGCTGTGTCTACAGCAAGGAAGAGGATGGCTCCACCTGTCTACATCATGCAGCCAAAATTG
GGAACTTGGAAATGGTCAGCCTGCTACTGAGCACAGGACAGGTGGACGTCAATGCCCAGGACAGTGGGGG
CTGGACGCCCATCATCTGGGCAGCCGAGCACAAGCACATCGATGTGATTCGTATGCTGCTGACCCGGGGT
GCCGATGTCACCCTGACTGACAATGAGGAAAACATCTGCCTGCACTGGGCCTCCTTCACGGGTAGTGCCG
CCATCGCTGAGGTCCTTCTGAATGCCCAGTGTGATCTCCATGCTGTCAACTACCATGGGGACACGCCCCT
GCACATAGCCGCCAGGGAGAGCTACCATGACTGTGTTCTGTTGTTCCTGTCTCGTGGAGCCAACCCTGAG
CTTCGGAACAAAGAAGGAGACACGGCATGGGATCTGACCCCAGAGCGCTCTGATGTGTGGTTTGCACTGC
AGCTCAATCGAAAGCTTAGGCTTGGGGTAGGGAACCGGGCTGTCCGCACCGAGAAGATCATCTGCCGGGA
CGTAGCCCGAGGCTATGAGAATGTACCCATCCCCTGTGTCAATGGTGTGGATGGGGAGCCGTGCCCGGAG
GACTACAAGTACATCTCTGAGAACTGCGAGACATCGACCATGAACATCGACCGCAACATCACCCATCTGC
AGCACTGCACGTGTGTGGATGACTGCTCCAGCTCCAATTGCCTATGTGGTCAGCTCAGTATCCGATGCTG
GTATGACAAGGACGGGCGGCTGCTCCAGGAGTTTAACAAGATCGAGCCCCCCCTGATCTTTGAGTGTAAC
CAGGCATGCTCCTGCTGGAGAAGCTGCAAGAACCGCGTGGTGCAGAGCGGCATCAAGGTACGGCTGCAGC
TCTACCGGACTGCCAAGATGGGCTGGGGGGTCCGAGCCTTGCAGACCATCCCCCAGGGCACGTTCATCTG
CGAGTATGTAGGAGAGCTGATCTCTGATGCCGAGGCTGATGTGAGAGAGGATGATTCTTACCTCTTCGAT
TTAGATAACAAGGATGGCGAGGTTTACTGCATTGATGCCCGTTACTATGGCAACATCAGCCGATTCATTA
ACCACCTGTGTGACCCCAACATCATCCCTGTCCGGGTTTTCATGCTGCACCAAGATCTACGGTTCCCACG
CATTGCCTTCTTCAGCTCCAGGGACATCCGGACTGGGGAGGAGCTGGGCTTTGACTACGGTGACCGATTC
TGGGACATCAAGAGCAAGTATTTCACCTGCCAGTGTGGCTCTGAGAAGTGCAAGCATTCAGCGGAGGCCA
TCGCCCTGGAGCAGAGCCGCCTGGCCCGGCTGGACCCCCACCCGGAGCTGCTCCCTGACCTCAGCTCCCT
GCCCCCCATCAACACCTGA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-MluI

ACCN: NM_147151

Insert Size: 3519 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.
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_147151.2, NP_671493.1

RefSeq Size: 3805 bp

RefSeq ORF: 3519 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 (2) has an alternate 5' terminal exon which includes the 5' coding sequence, and lacks an in-frame internal coding exon, compared to variant 1. The resulting isoform (b, also known as G9a short) has a shorter and distinct N-terminus and lacks an internal segment, compared to isoform a.