

Product datasheet for MR222714

Ehmt2 (NM_145830) Mouse Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: Ehmt2 (NM_145830) Mouse Tagged ORF Clone
Tag: Myc-DDK
Symbol: Ehmt2
Synonyms: Bat8; D17Ert710e; G9a; KMT1C; NG36
Mammalian Cell Selection: Neomycin
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
ORF Nucleotide Sequence: >MR222714 representing NM_145830
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCCCGCATCGCC

ATGCGGGGTCTGCCGAGAGGGAGGGGGCTGATGCGGGCCCGGGGCGGGGGCTGCGGCCCCACGGGCG
 GCCCGGGCCGGTGGGGGGCGCCACCAGGGCGAGGTAGGCCCCGAAGCCTGCTCTCGTGCCAG
 GGCCAGGCGTCTGGGCCCCAGCTGCCTGCCGGGTGACCGGCCCGGTTCTTGTCTCCCCTCC
 CAGGGGGAGGCCCGCTGAGATGGGGCGCTGCTGCTGGAGAAGGAGCCCGAGGAGCCCGAGAGAG
 TTCATAGCTCTTTGGGGACACCCTCAGAGTGAGGAGACCCTTCCCAAGCCAACCCGACTCCTTGA
 GCCTGCCGGCCCTCCTCTCCGGCTCTGTCACTGTACCCTCGGCGATGAGGGGGCTGACACCCTGTC
 GGGGCCGATCACTCATCGGGACGAACCCGAGAGCCTGGAGGGAGATGGGGTTCGATCGTGGCC
 ATGCCACAAAGTCGTTCCCTCTTCCCCAGCAAGGGGGTGCCTGTCCAGTCGGGCCAAAATGTCAAT
 GACAGGGGAGGAAAGTCGCCCCCTCGGTCCAGAGTTTGGCCATGAGGCTGTTGAGCATGCCCGGGCC
 CAGGGAGCTGCAACTGCTGGGCTGAACCCTCTCCGGCAACAATGCCGCCAGGAGGGGAGCCAAAG
 TGCACCGAGCCCGAAAACCATGTCCAACCTAGCAACGACAGCCTCCAATCCCTGAGAAGCGGCCCC
 TGAAGTCCAGCATTTCGCGATGAGTGATGACATGATCTGGGGAAGGTGACTTCAGATGTGGCCAAAAG
 AGGAAGCTGAACCTGTTAGCCTGTCCGAGGACTTGGGCTTCCCGGGGCTCAGGAGATAATCCTGG
 AGAAGGGAGAGCCAGGCCCTGGAGAGTGGGAGACGGTGGTGGGCGATGACTTCAGCCTGTACTATGA
 TGCGTACTCTGTGGATGAGCGGGTGACTCTGACAGCAAGTCTGAAGTGAAGCTCTAGCTGAACAGTTG
 AGTGAGGAGGAGGAGGAGGAAGAGGAGGAAGAAGAAGAGGAGGAGGAGGAGGAGGAGGAGGAGG
 AAGAAGAGGACGAGGAGTCGGGCAATCAGTCAGACAGGAGCGGTTCTAGTGGCCGGCGAAGGCCAAGAA
 GAAATGGCGAAAGACAGCCCGTGGGTGAAGCCATCTAGAAAACGGCGAAACGAGAGCCTCCGAGGGCC
 AAGGAGCAAGAGGAGTGAATGGTGTGGGTTCTCAGGGCCAGTGAGTACATGGAGGTTCTCTGGGGT
 CCCTGGAGCTGCCAGCGAGGGACCCTCTCCCCAACCGCTGGGGTCTCCAATGACACGTCTCACT
 GGAGACAGAACCGGGTTTGGAGAGTGCCCTCTGCAGCTGCCGATGGAGGCTCCAAGATTGACCGC



[View online »](#)

ATCAGCGAGAGAGCAGGGCACAAGTGCATGGCCACAGAGAGTGTGGATGGAGAGCTCCTGGGCTGCAATG
CTGCCATCCTTAAGCGGGAGACCATGCGGCCGTCTAGCCGCGTGGCGCTGATGGTGTCTGTGAGGCCCA
TCGAGCCCGCATGGTCAAGCACCATTGCTGCCCGGGCTGCGGCTACTTCTGCACAGCGGGCACCTTCCTG
GAATGCCACCCCGACTTTCGTGTAGCTCACCGCTTCCATAAAGCCTGCGTATCCCAGCTCAATGGGATGG
TCTTCTGTCCCCTGTGGAGAGGATGCCTCAGAGGCCAGGAGGTGACCATTCTCGGGGCGATGGGGG
AACACCCCAATTGGCACCGCAGCTCCTGCTCTGCCACCCTGGCACATGATGCCCCAGGGCGAGCGGAT
ACCTCCCAGCTAGCGCCGAATGCGAGGGCATGGAGAGCCGCGCGCCGCCCTGTGATCCCCTGGCTG
ACACCATCGACAGCTCAGGGCCTTCACTGACTCTGCCTAATGGGGCTGCCTCTCCGCTGTGGGTCTGCC
CCCAGGGCCGGCAGGGAAGCCCTGAAAAAGCCTTGGTCATCCAGGAGTCTGAGAGCGGAAGAAGCTG
CGATTCCACCACGGCAGCTGTACTGTGCGTGAAGCAGGGGAGCTGCAGAAGGTGATCCTTATGCTGT
TAGACAACCTGGACCCCAACTTCCAGAGCGACCAGCAGAGCAAGCGCACGCCCTGCACGCGGCCGCCCA
GAAGGGTTCGGTAGAGATCTGTGATGTGCTGCTGAGGAGGAGCAACATCAATGCCGTAGATAAGCAA
CAACGCACGCCACTAATGGAGGCCGTGGTGAACAACCCTGGAGGTGGCAGCTACATGGTGCAGTTAG
GTGGCTGTGTCTACAGCAAGGAAGAGGATGGCTCCACCTGTCTACATCATGCAGCCAAAATTGGAACTT
GGAAATGGTCAGCCTGCTACTGAGCACAGGACAGGTGGACGTCATGCCAGGACAGTGGGGCTGGACG
CCCATCATCTGGGAGCCGAGCACAAGCACATCGATGTGATTCTGTATGCTGCTGACCCGGGGTGGCGATG
TCAACCCTGACTGACAATGAGAAAAATCTGCCTGCACTGGGCCTCCTTACGGGTAGTCCGCCATCGC
TGAGGTCTTCTGAATGCCAGTGTGATCTCCATGCTGTCAACTACCATGGGGACACGCCCTGCACATA
GCCGCCAGGGAGAGCTACCATGACTGTGTTCTGTTGTTCTGTCTCGTGGAGCAACCCTGAGCTTCGGA
ACAAAGAAGGAGACACGGCATGGGATCTGACCCAGAGCGCTCTGATGTGTGGTTTGCAGTCA
TCGAAAGCTTAGGCTTGGGTAGGGAACCGGCTGTCCGACCGAGAAGATCATCTCGGGGACGTAGCC
CGAGGCTATGAGAATGTACCCATCCCCTGTGCAATGGTGTGGATGGGGAGCCGTGCCCGGAGACTACA
AGTACATCTCTGAGAAGTGGGAGACATCGACCATGAACATCGACCGCAACATACCCATCTGCAGCACTG
CACGTGTGGATGACTGCTCCAGCTCCAATTGCCTATGTGGTCAGCTCAGTATCCGATGCTGGTATGAC
AAGGACGGGCGGCTGCTCCAGGAGTTTAAAGATCGAGCCCCCCTGATCTTTGAGTGTAAACAGGCAT
GCTCCTGCTGGAGAAGCTGCAAGAACCCTGGTGCAGAGCGGCATCAAGGTACGGCTGCAGCTCTACCG
GACTGCCAAGATGGGCTGGGGGTCGAGCCTTGCAGACCATCCCCAGGGCACGTTTCTGCGAGTAT
GTAGGAGAGCTGATCTCTGATGCCGAGGCTGATGTGAGAGAGGATGATTCTTACCTCTTCGATTTAGATA
ACAAGGATGGCGAGGTTTACTGCATTGATGCCGTTACTATGGCAACATCAGCCGATTCTTAACCACT
GTGTGACCCCAACATCATCCCTGTCCGGTTTTTATGCTGCACCAAGATCTACGGTCCCACGATTGCC
TTCTTCAGCTCCAGGACATCCGACTGGGGAGGAGCTGGGCTTTGACTACGGTGACCGATTCTGGGACA
TCAAGAGCAAGTATTTACCTGCCAGTGTGGCTCTGAGAAGTGAAGCATTACAGCGGAGGCCATCGCCCT
GGAGCAGAGCCGCTGGCCCGGCTGGACCCCCACCGGAGCTGCTCCCTGACCTCAGCTCCCTGCCCC
ATCAACACC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >MR222714 representing NM_145830
Red=Cloning site Green=Tags(s)

```
MRGLPRGRGLMRARGRGRAAPTGGRGRGRGGAHRGRGRPRSLLSLPRAQASWAPQLPAGLTGPPVPCPLPS
QGEAPAEMGALLLEKEPRGAAERVHSSLGDTPOQSEETLPKANPDSLEPAGPSSPASVTVTVGDEGADTPV
GAASLIGDEPESLEGDGGRIVLGHATKSFSPSSKGGACPSRAKMSMTGAGKSPSPVQSLAMRLLSMPGA
QGAATAGPEPSPATTAQEQPKVHRARKTMSKPSNGQPPPEKRPPEVQHFRMSDDMHLGKVTSDVAKR
RKLNSGSLSEDLGSAGGSDIILEKGEPRPLEEWETVVGDDFSLYYDAYSVDERVSDSKSEVEALAEQL
SEEEEEEEEEEEEEEEEEEEEEDEESGNQSDRSGSSGRKAKKKWRKDSPVWKPSRKRKRREPPRA
KEPRGVNGVGSSEYMEVPLGSELEPSEGLSPNHAGVSNDSLETERGFEEPLPCSCRMEAPKIDR
ISERAGHKCMATESVDGELLGCNAAILKRETRPSSRVALMVLCEAHRARMVKHHCCPGCYFCTAGTFL
ECHPDFRVAHRFHAKCVSQLNGMVFCPHCGEDASEAQEVTIPRGDGGTPIGTAAPALPLAHDAPGRAD
TSQPSARMRGHGEP RPPCDPLADTIDSSGSLTLPNGGCLSAVGLPPGPGREALEKALVIQESERRKLL
RFHPRQLYLSVKQGELQKVI LMLLDNLDPNFQSDQQSKRTPHAAAQKGSVEICHVLLQAGANINAVDKQ
QRTPLMEAVVNNHLEVARVMVQLGGCVYSKEEDGSTCLHHAAKIGNLEMVSLLLSTGQVDVNAQDSGGWT
PIIWAAEHKHIDVIRMLLTRGADVTLTDNEENICLHWASFTGSAAIAEVL LNAQCDLHAVNYHGDTPLHI
AARES YHDCVLLFLSRGANPELRNKEGDTAWDLTPERSDVWFALQLNRKRLR LGVGNRAVRTEKIICRDVA
RGYENVPIPC VNGVDGEPCEPEDIKYISENCETSTMNIDRNITHLQHCTCVDDCSSNCLCGQLSIRCWYD
KDGRLLEFNKIEPPLIFECNQACSCWRCKNRVVQSGIKVRLQLYRTAKMGWVRALQTI PQGTFICEY
VGELISDAEADVREDDSYLFDLDNKDGEVYCIDARYYGNISRFINHLCDPNII PVRVFMLHQDLRFPRIA
FFSSRDIRTGEELGFDYGRDFWDIKSKYFTCCGSEKCKHSAEAI ALEQSRLARLDHPHELLPDLSSLPP
INT
```

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/ja2279_c06.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_145830

ORF Size: 3792 bp

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

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_145830.3](#)

RefSeq Size: 4070 bp

RefSeq ORF: 3792 bp

Locus ID: 110147

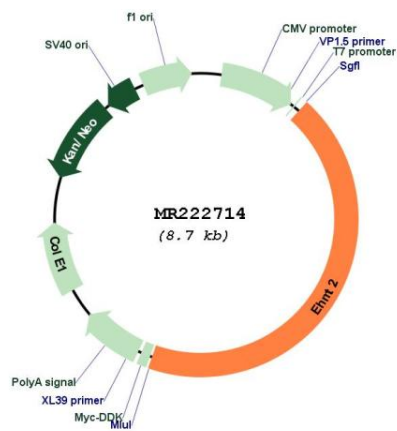
UniProt ID: [Q9Z148](#)

Cytogenetics: 17 18.45 cM

MW: 138 kDa

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]

Product images:

Circular map for MR222714