

## Product datasheet for MC224246

### Kdm3a (NM\_173001) Mouse Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Kdm3a (NM_173001) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Kdm3a
Synonyms:	1700105C21Rik; C230043E16Rik; JHDM2a; Jmjd1; Jmjd1a; KDM2A; TGSA; Tsga
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin
Fully Sequenced ORF:	>MC224246 representing NM_173001 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGTGCTCAGCTCGGAGAAAGTTGGCCAGTATTGGTGGGAAGCGATTCTCAGTCTGTCCGAGCCG  
AAGGCAACGAAGGCGCCAGGACAACCTGGGACTTGGAGCGGTTGCCAGTGGCCCTGGCTGTCCGGGAG  
CATTTCGAGCTGTTCCACACCCAGCTTACTAAGAAAGACTTGAAGGTGTGTGGAGTTTATGATGGGGAG  
TCTTGGAGAAAGAGAAGATGGATAGATGTCTACAGCCTTCAGAGAAAAGCATTTCAGTAGAGCATAACC  
TGGTTTTGGCAGAACGAAAATCACCTGAAGTTCCTGAGCAAGTTATTCAGTGGCCTGCAATAATGTACAA  
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TTTGTTCCAAAGACCTTTTGAACCTATACAGGATGTTAACAGTCTTCGGCTTCCCTTACTGATAATC  
AGACAGTCAGTAAGGAATTTCAAGCTTTGATTGTAAAACATTTGGATGAAAGCCATCTTTTACAAGGTGA  
CAAGAACCTTGTGGTTCAGAAGTAAAAATTTAGCTTGGACCCATCTACTCAGTGGTTTTTCAGCAACT  
GTTGTACATGGAACCCATCATCCAAAACCTTCAAGTCAACTGTGAGGAGATTCAGCACTGAAAATTTG  
TCGACCCAGCACTGATTCATGTTGAAGTTGTACATGACAACTTTGTGACATGGGTAATTTACAAGAAC  
TGGAGCTGTAACGCAAGTCTTCTGAGAATAACGGAAGTTCGGTTTTCTAAACAAGCAAAAATCTTGTCT  
GAGGCCTCTCCAGTATGTGTCCTGTACAGTCTGTTCCACAACAGTGTTAAGGAGATCCTGCTTGGCT  
GTAAGTGCAGCAACTCCATCTAGCAAGGACCCAAAGACAGCAAAAATACTCCCGAGGAGCAATTTCCACC  
TAACATTGGAGCAAAAACCTTCTCAAGGATGTCATAAGCAGAACTTACCAGAAGAACTTTCTTCTGTCTA  
AACACAAAACCTGAAGTACCGAGAACAACCAAGAGATGTCTGCAAGAAGGATTACTTTCTCAAAAATCTT  
CTCAGGTTGGAGCTGGAGACTTGAATACTGAGTGGCCAAAGGTAGCTGTATCCAGCCTAAAACAAA  
CACTGATCAGGAGAGCAGACTGGAGTCTGCTCCACAGCCAGTCACTGGCCTTCAAAGGAGTGCTTGCCT  
GCAAAGACTTCTCTAAGGCAGAACTGGACATTGCCACCCTCTGAACTGCAGAAGCATCTAGAACATG  
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TGCAGAAAAGAAGGTCGAACCTTCAATTTAGGTTCCAGTCCAGAAATTTAAAGGAAAATTCAGTAAAA  
GTAGATAATGAAAGCTGTTGTACAAGAAGCAGTAATAAAACCCAGACTCCCCAGCCCGAAGTCAGTTT



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TGACAGACCCAGATAAAGTCAGGAAGCTGCAGCAGAGCGGAGAGGCCTTTGTTTCAGGATGACTCCTGTGT  
 TAACATCGTGGCACAGCTGCCAAGTGTGCGGAGTGTGCGACTAGACAGCCTGCGCAAGGATAAAGGACCAG  
 CAGAAGGACTCTCCTGTGTTTTGTGCGTTTTTCCACTTCAGGAGATTACAATTCAACAAGCATGGTGTGT  
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 CAAAAATGTTGTGGGACTGATTTGGACACAGCAAAATATCCTGGCCAATATTGGAGACCACTTCTGT  
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 CTGTCAAAGGAGTTAGAGAAATGTGTGATGTGTGACACAACCATTTTCAACCTGCACCTGGGTGTGCC  
 TCGGTGTGGGTTTTGGAGTATGTGTAGATTGCTACCGGATGAAGAGGAAGAACTGCCAACAGGGTGTGCC  
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 CACTTCACCTTTAACTGGCTAGCTGACCTTACCAGTGGGAATGTCAACAAGGAGAATAAGGAAAAACAG  
 CTGACTATGCCAATTTTAAAGAATGAAATCAAATGCCTTCCACCCTTGCCCTCTGAACAAGCCCAGCA  
 CAGTCCCTCATACTTTTAAACAGCACCATCTTGACACCTGTGAGCAACAATAATTCAGTTTCCCTTAGAAA  
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 CTAGCATTCTTGGCTTTGACACTCCTCACTACTGGCTGTGTGACAACCGCTGTGTGCTTGAAGACCC  
 CAACAATAAGAGCAATTGGAATGTTTTAGGGAATGCTGGAAACAAGGGCAGCCAGTGTGGTGTGCGGGC  
 GTGCATCATAAATTAACACTGAACTCTGGAAACCCGAGTCTTCAGAAAAGAGTTTGGTGAAGCAGGAAG  
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 CCGCCAGGAGAAGACTTCAGAGACATGATGCCTTCCAGGTTTGTGATCTGATGGCCAACATTCCTACTGC  
 CTGAGTACACCAGGCGAGATGGCAAACCTGAACCTGGCTTCCAGACTGCCAACTACTTTGTACGGCCAGA  
 CCTGGGCCCAAGATGTACAATGCTTATGGATTGATCACTCCAGAGGATCGGAAATATGGGACCACAAAT  
 CTTCACTTAGATGTATCTGATGCAGCCAATGTCATGGTTTATGTGGGAATCCCAAAGGACAGTGTGAAC  
 AAGAAGAAGAAGTCCTTAGAACCATCCAAGATGGAGATTCTGATGAACTCACAATCAAGAGATTTATTGA  
 AGGAAAAGAGAAGCCAGGAGCCCTTTGGCACATATATGCTGCTAAAGACACAGAGAAGATAAGAGAATTC  
 CTTAAAAAGGTATCAGAGGAGCAGGGTCAAGACAACCTGCAGACCATGACCCTATCCACGATCAGAGCT  
 GGTATTTAGACCGATCGCTGAGAAAGCGCCTCTATCAAGAGTACGGCGTGAAGGCTGGGCTATTGTACA  
 GTTTCTTGGGGATGTGGTGTATCCCAGCAGGAGCGCCACATCAGGTTTATAACTTATACAGCTGTATC  
 AAAGTGGCTGAAGACTTTGTGTCTCCAGAGCATGTTAAACACTGCTTCTGGCTTACTCAGGAATCCGTT  
 ACTTGTACAGACTCATACCAACCATGAAGATAAATTGCAGGTGAAAAATGTTATCTACCATGCAGTGAA  
 AGATGCAGTTGCTATGCTGAAAGCCAGTGAATCCAGTTTGGGCAACCTTAA

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAAGGTTTAA

- Restriction Sites:** SgfI-MluI
- ACCN:** NM\_173001
- Insert Size:** 3972 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\\_173001.3](#), [NP\\_766589.1](#)

**RefSeq Size:** 4857 bp

**RefSeq ORF:** 3972 bp

**Locus ID:** 104263

**UniProt ID:** [Q6PCM1](#)

**Cytogenetics:** 6 C1

**Gene Summary:** Histone demethylase that specifically demethylates 'Lys-9' of histone H3, thereby playing a central role in histone code. Preferentially demethylates mono- and dimethylated H3 'Lys-9' residue, with a preference for dimethylated residue, while it has weak or no activity on trimethylated H3 'Lys-9'. Demethylation of Lys residue generates formaldehyde and succinate. Involved in hormone-dependent transcriptional activation, by participating in recruitment to androgen-receptor target genes, resulting in H3 'Lys-9' demethylation and transcriptional activation (By similarity). Involved in spermatogenesis by regulating expression of target genes such as PRM1 and TNP1 which are required for packaging and condensation of sperm chromatin (PubMed:17943087). Involved in obesity resistance through regulation of metabolic genes such as PPARA and UCP1.[UniProtKB/Swiss-Prot Function]  
Transcript Variant: This variant (1) represents the longest transcript and encodes the longer isoform (a). Variants 1, 2, and 3 all encode the same isoform (a).