

Product datasheet for **MG211491**

Kdm4a (NM_172382) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Kdm4a (NM_172382) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Kdm4a
Synonyms:	D4ErtD222e; JHDM3A; Jmjd2; Jmjd2a; mKIAA0677
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>MG211491 representing NM_172382 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGCTTCTGAATCAGAACTTTGAACCCAGTGCTCGGATCATGACCTTTACCCACCATGGAAGAGT
TCCGGAACCTCAGCCGTACATTGCCTACATTGAATCCCAAGGAGCTCATCGGGCTGGGCTAGCCAAGGT
CGTTCCTCCAAAGAGTGAAGCCTCGAACATCCTACGACGATATTGATGATCTAGTCATCCCTGCGCC
ATCCAGCAGCTGGTGACTGGCCAGTCTGGCCTCTCACTCAGTACAACATACAGAAGAAAGCCATGACCG
TTCGTGAGTTCGCAAGATCGCCAATAGCGACAAGTACTGCACCCCGCGATACAGTGAATTTGAAGAACT
TGAGCGTAAATACTGGAAAAACCTCACATTCATCCTCCCATCTATGGAGCAGACGTGAATGGTACTCTC
TATGAACAGCACGTTGATGAGTGAATATCGGCCGGCTGAAGACCATCCTGGACCTGGTGGAGAAGGAGA
GCGGGATCACCATTGAGGGGGTGAACACCCCTACCTTTACTTCGGCATGTGGAAGACGTCTTCGCTG
GCACACGGAAGACATGGATCTATACAGCATCAACTATCTGCACCTCGGAGAGCCAAAGTCTTGGTACTCT
GTTCCACCTGAGCATGGGAAACGCTGGAGCGTCTTGCCAAAGGCTTTTTCCAGGAAGTCTCAAAGCT
GTGAGGCTTTTCTCCGCCACAAGATGACCCTGATCTCCCATTAATGCTGAAGAAGTATGGCATTCCCTT
TGACAAGGTGACCAAGAAGCTGGCGAGTTTATGATCACTTTTCCGTATGGTTACCATGCTGGCTTCAAC
CATGGCTTCAACTGTGCAGAGTCAACCAATTTTGCTACCCGTCGGTGGATTGAGTATGGCAAGCAGGCTG
TGCTGTGCTCCTGCAGAAAAGATATGGTGAAGATCTCCATGGACGTGTTGTTGAGGAGGTTCCAGCCGGA
ACGCTACAAACTTTGAAAGCTGGGAAGGACAGCATGGTTATTGACCACACTCTGCCACACCCGGAAGCA
GCCGAGTTCCTGAAGGACAGCGCGACTAACCCCGAGAGCAGGGAGTGAGGAGTGCCAGAGGAGGACG
TGAAGCAGCGGATCAGGGAGAGGAGGGGATGTGAAGAGAAGCCTGGCCAAGCATCGGATCGGGACAAA
GAGACACAGAGTCTGTCTGAAAATACCCAGGAGGTCAGTCAGAGCGAGCTTTCCCAAGGAAGAGCTA
AGTTCTGGACAGTATGAGATGACAGAGTGCCCGGCCACCTCGCCCCAGTGAGGCCACCCACAGCTCCG
TGCGGCAAGTTGAGGACAGTCTTCCCTCCAGATTACTCTGACCCACTGAAGTCAAATTTGAAGAGCT
GAAGAATGTCAAAGTAGAAGAGGAGATGAGGAGGATGAGCCGAAGCAGCCGACTGGACCTTTCTGTG



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AATCCTGCGTCTGTAGGAGGACGCCTCGTCTTCTCGGGTTCCAAAAAGAAATCATCTTCCAGCCTGGGCT
 CCACTTCACTCAGGATTCAGTTTCTTCCAGATTCTGAAACCGCCGAGTCTGTCTTCCAGGGCCAAGA
 GAAAACGGGAGTTCTCACCGTGCACAGCTATGCCAGAGGGGACGGCAAGGCTGCCACAGGAGAGCCGAGT
 GTGAAGAAGAAGCGCAGTGTCCCCGCAGCATCAGCGAGCAGGAGCTGGCAGAGGTTGCAGATGAGTACA
 TGCTTTCCCTGGAGGAGAATAAGAAGACCAAGGGTCGCCGCCAGCCCTTGAGCAAGCTCCCACGCCACCA
 CCCACTCGTGTGCAGGAGTGGCCAGCCTCTGAGCCAGCTGTGGCAGAACCACCCCGAAGCTTTGAGGCTG
 GAGGACAGAGGCTTGGGCCAAGCCTCTGAGCCAGCTGTGGCAGAACCACCCCGAAGCTTTGAGGCTG
 AAAAGGAATTCATGAGATCATGGCCCAACAGGCCCTCACTGTGCTGTGTATGATCTTCCAGACCTA
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 AGGACCAAGCCACTGATCCCCGAAATGTGCTTTACCACCCTGGTGCAGCACAGACATCAATCTGTCCA
 CCCCCTACCTAGAGGAGGATGGCACCAGCATGCTAGTGTCTGCAAGAAGTGCAGTGTCCGGTCCACGC
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 GCTGGCTGCTGTGTGCAGTGTCCATGGCCGCTGCCCACTGCCTTCCATGTGAGCTGTGCCAGGCTG
 CTGGGGTGATGATGCAACCCGACGACTGGCCCTTTGTTGTCTTACATCACGTGCTTCCGTCACAAGATTCC
 CAATCTGGAGCGTGCTAAGGGAGCCTTGTGAGCATCACGGCGGGCCAGAAGTTATCAGCAAACACAAG
 AACGGGCGCTTCTACCAGTGTGAGGTGGTCTGAGTCTCACCACCGAGACCTTCTACGAAGTCAACTTTGACG
 ACGGCTCCTTCAGTGACAACCTTTATCTGAGGACATAGTGGTAAATGTCTGAAAGCGGCTTCTGGCAGCA
 CTTTGGGTCTGGGACATCTTCTGTTATTGCCGGCTGGATGACTGTGGTCTTTTGCCTGCCCTGGTCA
 GTTTCAAACAGAAAGAGCCTTTATCCAGGTTCCCTTTCAAGGAAGAGTGGACATGCTGGGGCGCTCA
 GCTTCCCCGAGGAGTTCAGAGGAGTCAGTGTCCCTGCAGTCCACTGAAATATGCTTATATCTCAGACCA
 AATTATTTCTAATAGCATC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>MG211491 representing NM_172382
 Red=Cloning site Green=Tags(s)

MASESETLNPSARIMTFYPTMEEFRNFSRYIAYIESQGAHRAGLAKVVPKPEWKPRTSYDDIDDLVIPAP
 IQQLVTGQSGLFTQYNIQKAMTVREFRKIANSDKYCTPRYSEFEELERKYWKNLTFNPPYIYADVNGTL
 YEQHVDEWNIQRLKTIKLDLVEKESGITIEGVNTPYLYFGMWKTSFAWHTEDMDLYSINYLHFGPEKSWYS
 VPPEHGKRLERLAKGFFPGSAQSCEAFLRHKMTLISPLMLKKYGIPFDKVTQEAGEFMITFPYGYHAGFN
 HGFNCAESTNFATRRWIEYKQAVLCSCRKDMVKISMDVFRRFQPERYKLVKAGKDSMVIDHTLPTPEA
 AEFLKDSGGLTPRAGSEECPEEDVEAADQGEEDVVKRSLAKHRIGTKRHRVLEIPQEVSSQSELPKEEL
 SSGQYEMTECPATLAPVRPTHSSVRQVEDSLPFPDYSPTTEVKFEELKNVKLEEEDEDEPEAAALDLSV
 NPASVGGRLVFSGSKKSSSSLGSTSSQDSVSSDSETAESVSCQGQEKTVLTVHVSARGDGKAATGEP
 VKKKRSAPRSISEQELAEVADEYMLSLEENKTKGRRQPLSKLPRHPLVLQECGSDDETSEQLTPEEEA
 EETEAWAKPLSQLWQNRPPNFEAEKEFNEIMAAQAPHCVCMIQTYHQVEFGAFSQSCGDASEPAQTQ
 RTKPLIPEMCFTTTGCSTDINLSTPYLEEDGTSMLVSCCKCSVRVHASCYGVPPAKASEEWMCSRCSANA
 LEEDCCLCSLRGGALQRANDRWVHVSACAILEARFVNIASRSPVDVSKIPLPRFKLKCVFCKRRRKN
 AGCCVQCSHGRCPTAFHVSCAQAAGVMMQPDWPFVVFITCFRHKIPNLERAKGALLSITAGQKVISKHK
 NGRFYQCEVVRLTTETFYEVNFDGGSFSDNLYPEDIVVMSESGFWQHFSGTSSCYCRLDDCGLFACPWS
 VSKQKEPLFPGSLSRKSGHAGALSFPEEFRGVSVPSCPLKYAYISDQIISNSI

TRTRPLE - GFP Tag - V

Restriction Sites:

Sgfl-MluI

Cloning Scheme:


ACCN: NM_172382

ORF Size: 3099 bp

OTI Disclaimer: 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_172382.2](#), [NP_759014.2](#)

RefSeq Size: 3376 bp

RefSeq ORF: 3102 bp

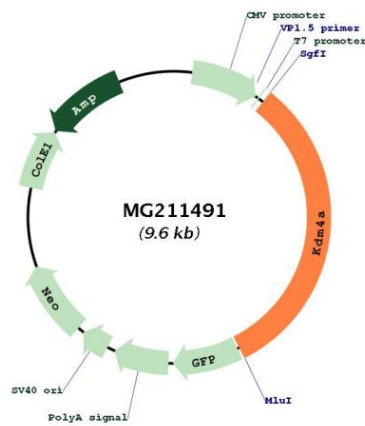
Locus ID: 230674

UniProt ID: [Q8BW72](#)

Cytogenetics: 4 54.31 cM

Gene Summary: Histone demethylase that specifically demethylates 'Lys-9' and 'Lys-36' residues of histone H3, thereby playing a central role in histone code (PubMed:24953653). Does not demethylate histone H3 'Lys-4', H3 'Lys-27' nor H4 'Lys-20'. Demethylates trimethylated H3 'Lys-9' and H3 'Lys-36' residue, while it has no activity on mono- and dimethylated residues. Demethylation of Lys residue generates formaldehyde and succinate. Participates in transcriptional repression of ASCL2 and E2F-responsive promoters via the recruitment of histone deacetylases and NCOR1, respectively (By similarity).[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MG211491