

## Product datasheet for **MC224835**

### Kdm5a (NM\_145997) Mouse Untagged Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** Kdm5a (NM\_145997) Mouse Untagged Clone  
**Tag:** Tag Free  
**Symbol:** Kdm5a  
**Synonyms:** AA409370; C76986; Jarid1a; Rbbp2; RBP2  
**Vector:** pCMV6-Entry (PS100001)  
**E. coli Selection:** Kanamycin (25 ug/mL)  
**Cell Selection:** Neomycin  
**Fully Sequenced ORF:** >MC224835 representing NM\_145997  
Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGCGTCCGTGGGCCCGGGGGCTACGCGCGGAGTTCGTGCCACCGCCGAGTGCCCGGTCTTTGAGC  
CCAGTTGGGAGGAGTTCACAGACCCGCTGAGTTTTATCGGGCGCATCCGGCCCTTTCGGGAGAAAACGGG  
CATCTGCAAAATCCGGCCACCAAGGATTGGCAACCTCCATTTGCCTGTGAAGTAAAAACCTTCCGTTTC  
ACTCCTAGAGTCCAGCGCTGAATGAACCTGAGGCAATGACTAGAGTAAGATTGGACTTCTTGGATCAAC  
TGGCAAAATTTGGGAACCTCAAGGATCTACATTGAAGATCCCTGTGGTGGAGAGAAAAATCCTGGATT  
GTATGCTTTAAGCAAGATTGTTGCCAGCAAAGGAGTTTTGAAATAGTCACCAAAGAGAAGAAATGGTCT  
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GAATTCTACCCATATGAACTTTCCAATCTGGTGTGAGCCTTATGGGTGTACAAATGCCTGATTTAGA  
TCTTAAAGAAAAGTTGAGGCTGAGGTTCTCAGCACTGACATCCAGCCTTCCCCAGAGCGGGGAACAAGA  
ATGAATATCCACCAAAGAGAACAAGACGAGTTAAGTCTCAGTCAGACTCTGGAGAAGTAAATAGAAACA  
CAGAAGTGAAGAACTTCAGATTTTGGGGCTGGACCCAAAGTTGTGGCCTGGCAGTAGGAGCAAAAGA  
TAAAGAAGATGAAGTCAACCGAAGAAGAAAAGTTACCAACAGGTGAGATGCATTTAACATGCAAAATGAGA  
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ATGAGGATAAACTGCTTTTGTGTGATGGGTGCGATGACAGCTATCATACTTTTGTCTACTTCCACCACT  
ACCTGATGTCCCCAAAGGAGACTGGAGGTGCTCTAAATGTGTTGCTGAGGAATGTAAACAACTCGAGAA  
GCCTTTGGATTTGAGCAAGCTGTAAGAGAATATACACTTCAAAGCTTTGGAGAGATGGCAGATAATTTTA  
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AGTAAGTAGCATTGAAGAAGATGTTATTGTAGAGTATGGAGCTGATATCTCTTCAAAGATTTTGGAAAT  
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GGTGCCATGGCTCTATGTGGAAATGTGCTTTTCTCTTTTGTGGCATATTGAAGTCACTGGAGTTAT  
TCCATTAACACTTGATTGGGCGAGCCAAAGACATGGTATGGTGTACCATCTCATGCTGCAGAACAAAC



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TGGAGGAGGTGATGAGGGAGCTGGCCCCTGAGTTATTTGAATCCCAGCCTGATCTCCTACATCAGTTAGT  
AACCATCATGAACCCAAATGTGCTCATGGAGCATGGTGTGCCTGTGTACAGGACTAATCAGTGTGCTGGA  
GAGTTTGTGGTGACGTTTCTCGTGCCTATCACTCTGGATTTAACCAGGGATACAACCTTTGCCGAAGCGG  
TGAACCTCTGACTGCTGACTGGTTGCCATTGGACGTCAGTGTGTAATCACTATCGACGGCTCAGGCG  
CCATTGTGCTTTTACATGAGGAACCTATTTCAAGATGGCAGCAGATCCAGAATGCTTAGATGTGGG  
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TTCAAATGGGTGTCGTGATGTCAGAAGAAGAAGTCTTTGAACCTGTTCCCTGATGATGAGCGCAGTGTG  
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TATCATCCAACCTGATTTGTGCTCTTGCCCCATGCAGAACAATGTCTTAGGTACCCTATCCACTAGAAG  
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TGATGGATGAAACCCAGATTCTTCCAAACTCCAAATGTTAATAGACATGGGCTCTAGTCTCTATGTGGA  
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CTCACCATGCTGTAGAAAAGCAATGGCCGAACACAGGAACTCCTTACAGTCTCTGAACGATGGGAAGA  
GAAGGCTAAGGTCTGCCTGCAAGCAAGACCTCGGCACAGTATGGCAAATTTAGAAAATATTGTGAATGAA  
GCCAAGAACATTCAGCCTTTCTACCCAATGTGTGCTTAAAGAAGCCTTACAAAAGGCTCGTGAAT  
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TGCTAAAGGACGCCCTATCCCTGTGCTTGTGATGCCTTCAAGTGGAGTCAAGGATGACAGGATGACAGCA  
CGGGCCTGGAGAGAACGTAAGTGGCGGACCTTCTTAAAAAGAATTCCAGCCATACATTGTTACAGGTGC  
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TCAGAGCAGCCAACTAGCCAAGATGACAATTGTGGAGCGCATAGAAGAAGTGAATTTTGTATTTGCCG  
CAAGACAGCCAGTGGTTTATGCTACAGTGTGAGCTCTGCAAAGACTGGTTCCATAACAGCTGTGTTCCC  
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TGTACGGTTGCCGGAAGGAGAAGCACTGCAAGTGTGACAGAACGTGCCATGAGTTGGCAAGATAAAGCA  
CGCCAAGCTTTAGCCACAGATGAACTGTCTCTGCCCTGGCCAAGCTCTCTGTGCTAAGCCAGCGTATGG  
TGGAACAAGCAGCTAGAGAAAAAAGTAAAGATTATCAGTGCAGAACTCCAAAAAGCAGCTGCCAATCC  
AGATTTACAGGGACACTTACCTAGTTTCCAGCAGTCTGCTTTTAAACCGGGTGGTGAAGCAGTGTATCATCT  
TCCCCCACCACAAATGGACTATGATGATGAAGAAACAGATTCTGATGAAGATATTGCGGAGACATACG  
GCTATGACATGAAGGATACAGCCAGCGTGAAGTCTCTAGTAGTCTGGAACCCAATCTCTTTTGTGATGA  
AGAGATTTCCATCAAGTCTGAGGAAGTGGTGAATGACTCACATGTGGACGGCACCGTCATTCTGTGACAGCAT  
GCATATTTCTCTGCTTCAAAGAGTTGTTCTCAAGTTCTAGCACTCCAAGAAAGCAGCCTCGGAAGAGCC  
CTTTGGTTCCAGAAAGTTTGGAGCCTCCAGTATTGGAATTGTCTCCTGGAGCAAAAGCCAGTTGGAAGA  
ACTCATGATGGTTGGAGACCTCCTAGAAGTGTCTCTGGATGAGACACAACACATTTGGCGGATTTTGCAG  
GCCACACATCCACCCTCAGAGGACAGATTCTTACATATCATGGAGGATGATAGCATAGAAGAGAAAACCAT  
TAAAAATGAAAGGAAAGGACTCTTCAAGAGAAGAAACGAAACGGAAGCTAGAAAAGGTAGAACAGCTTTT  
TGGAGAAGGAAAACAGAAGACCAAGGAGCTAAAGAAAATAGATAAACCTAAAAAGAAGAAATTAATAA  
AATGTGGACAAAACAAAAGAGCTGAATAAATTGGCCAAGAAGTTAGCTAAAGAAGAAGAGCGAAAGAAAA  
AGAAAGAAAAGGCTGCTGCCGCAAAGTGGAGCTTGTGAAAGAGAGCACGGAGAAGAAACGGGAGAGGAA  
GGTGTGGATATCCCCTCAAAGTATGACTGGTGGGGGACAGAGGAGTCTGATGATGAGAATGCTGTGTGT  
GCAGCCAAAACGCAAGGCCGTGTAAGGACAAGGTAGACTGGGTACAGTGTGATGGTGGCTGTGATG  
AGTGGTTTCATCAAGTTTGTGTTGGTGTATCCGCAGAAATGGCTGAAAATGAAGATTACATCTGTATAAA  
CTGTGCAAGAAGCAGGGGCCAGATAGCCAGGCCAAGCACCACCTCTCCCTTCTAATGAGCTACAAA  
CTACCAATGGAGGATCTTAAAGAGACCAGTAG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA

<b>Restriction Sites:</b>	Sgfl-Mlul
<b>ACCN:</b>	NM_145997
<b>Insert Size:</b>	5073 bp
<b>OTI Disclaimer:</b>	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).
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_145997.2</a> , <a href="#">NP_666109.2</a>
<b>RefSeq Size:</b>	10969 bp
<b>RefSeq ORF:</b>	5073 bp
<b>Locus ID:</b>	214899
<b>UniProt ID:</b>	<a href="#">Q3UXZ9</a>
<b>Cytogenetics:</b>	6 56.95 cM
<b>Gene Summary:</b>	Histone demethylase that specifically demethylates 'Lys-4' of histone H3, thereby playing a central role in histone code. Does not demethylate histone H3 'Lys-9', H3 'Lys-27', H3 'Lys-36', H3 'Lys-79' or H4 'Lys-20'. Demethylates trimethylated and dimethylated but not monomethylated H3 'Lys-4' (PubMed:17320161, PubMed:17320163). Regulates specific gene transcription through DNA-binding on 5'-CCGCC-3' motif. May stimulate transcription mediated by nuclear receptors. Involved in transcriptional regulation of Hox proteins during cell differentiation (By similarity). May participate in transcriptional repression of cytokines such as CXCL12. Plays a role in the regulation of the circadian rhythm and in maintaining the normal periodicity of the circadian clock. In a histone demethylase-independent manner, acts as a coactivator of the CLOCK-ARNTL/BMAL1-mediated transcriptional activation of PER1/2 and other clock-controlled genes and increases histone acetylation at PER1/2 promoters by inhibiting the activity of HDAC1 (PubMed:21960634). Seems to act as a transcriptional corepressor for some genes such as MT1F and to favor the proliferation of cancer cells (By similarity).[UniProtKB/Swiss-Prot Function]