

## Product datasheet for **MC206088**

### **Aof2 (BC059885) Mouse Untagged Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Aof2 (BC059885) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Aof2
Synonyms:	1810043O07Rik; AA408884; Aof2; D4Ertd478e; Kdm1; Lsd1; mKIAA0601
Mammalian Cell Selection:	Neomycin
Vector:	PCMV6-Kan/Neo (PCMV6KN)
E. coli Selection:	Kanamycin (25 ug/mL)



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**Fully Sequenced ORF:** >BC059885  
 CGCGGGGGTGTGGCTTCGCACGGAGCGTGAGAGGTGCGGGGCGGAGAGGCCGAGGCGGCTGCGGACC  
 CACGGAGCGGCAGACCGATCGGCCCTGCGGCCCGCGGCGGCCAGGCGGCCGAGATGTTGTCTGGGAAG  
 AAGGCGGCGGGCGGCAGCGGCAGCGGCGGCGGCGGCGGCTGCTGGGACCGAGGCCGGTCCGGGGCGG  
 CGGGCGGTGCCGAGAACGGCTCTGAGGTGGCCGCGCCCGCGGGCCTGACGGGCCACCCGACATGGC  
 TACGGGGCGGCGGGCGAGCGCACTCCCGAAAAGAAGGAGCCTCCGCGGGCTCGCCGCCGGGGCCTA  
 GCCGAGCCGCGGGGTCTGCTGGGCCCCAGGCGGGGCCACAGCCGGGCCCGGCTCCGCGACGCCCATGG  
 AGACCGGAATAGCCGAGACCCCGAGGGCCGACGACCAGCCGGCGCAAGCGGGCCAAGGTAGAATACAG  
 AGAAATGGATGAAAGCTTGGCCAACCTCTCAGAAGATGAATATTTCGGAAGAAGAAAGAAATGCTAAA  
 GCAGAGAAGGAAAAGAAGCTTCCCCACCACCTCTCAAGCCCCACCTGAGGAAGAAAATGAAAGTGAGC  
 CGGAAGAGCCGTCTGGTGTGGAGGTGCAGTTTTCAAAGCCGACTTCCCATGACCGAATGACCTCTCA  
 GGAAGCAGCCTGTTTCCAGACATCATCAGTGGCCTCAGCAGACACAGAAGTTTTTCTGTTTCATCAGG  
 AATCGCACATTGCAGTTATGGCTGGACAACCTCAAAGATCCAGCTGACGTTTGAAGCCACTCTCCAGCAGC  
 TGGAAAGCCCTTACAACAGCGATACTGTGCTTGTCCACCGAGTTCACAGTTACTTAGAGCGCCATGGTCT  
 TATCAACTTCGGCATCTACAAGAGGATAAAACCCTTACCAATTAAGAACAGGAAAGGTGATTATTATA  
 GGTTCAGGTGTTTCTGGCTTGGCAGCAGCTCGACAGCTACAGAGTTTTGGGATGGATGTCACACTTCTGG  
 AAGCCAGGGATCGAGTAGGTGGACGAGTTGCTACATTTGAAAAGGAAACTATGTAGCTGATCTTGGCGC  
 CATGGTTGTAACAGGTCTTGGAGGGAATCCCATGGCTGTGCTCAGCAAACAAGTAAATATGGAAGTGGCC  
 AAGATCAAGCAAAAATGCCCACTTTATGAAGCCAAATGGACAAGCTGTTCCAAAAGAAAAGATGAAATGG  
 TAGAACAAAGAAATTAACCGGTTGCTAGAAGCCACTTCTTACCTTAGTCACCAAGTACTCAACGTCTCT  
 CAATAATAACCTGTATCCCTTGGCCAGGCATTGGAGGTTGTTCATTGAGTCAAGAAAAGCATGTCAA  
 GATGAGCAGATTGAACATTGGAAGAAGATAGTAAAACCTCAGGAGGAGTTGAAAGAGCTTCTTAATAAGA  
 TGTAATAATTTGAAGGAGAAAATTAAGAGCTCCATCAGCAATACAAGAAGCTTCAAGAAGTGAAGCCGCG  
 CAGAGATATCACAGCCGAGTTCCTGGTGAAGAGCAAGCACAGGGACCTGACTGCCCTCTGCAAGGAATAT  
 GATGAATTAGCTGAAACACAAGGAAAGCTAGAAGAAAACCTTCAAGAATTGGAAGCCAATCCCCAAGTG  
 ATGTATACCTCTCATCAAGAGACAGACAAATACTTACTGGCATTGTTGCAAACTTGAATTTGCCAACGC  
 CACACCTCTCTACCCTCTCTTAAACATTGGGATCAGGATGATGACTTTGAGTTTACTGGAAGCCAC  
 CTGACAGTAAGGAATGGCTACTCATGTGTGCTGTGGCTTGTAGCTGAAGGCTTGGACATTAAGTGAACA  
 CAGCAGTGGCGCAGGTTGCTACACAGCCTCAGGATGTGAAGTATTGCTGTGAACACAGTTCACAAG  
 TCAAACCTTTATTTATAAGTGTGATGCAGTTCTGTACACTTCTTTGGGAGTGTGAAGCAGCAGCCA  
 CCAGCTGTTGAGTTGTGCCACCTTCTCTGAGTGGAAAACATCTGCAGTCCAAAGGATGGGATTTGGCA  
 ACCTTAAACAAGGTGGTGTATGCTTTGACCGTGTGTTCTGGGACCAAGTGTCAATTTGTTTGGGCACGT  
 TGGCAGTACAACCTGCTAGCAGGGGTGAGCTCTTCTCTTCTGGAACCTATATAAGCTCCAATACTATTG  
 GCCCTGGTAGCAGGAGAAGCTGCTGGCATTATGGAGAACATTAGTGATGATGATTGTCGGCCGGTGGC  
 TGGCCATTCTCAAAGGGATTTTTGGCAGCAGTGCAGTCCACAGCCCAAGGAAACTGTGGTATCTCGTTG  
 GCGTGTGATCCGTGGGCCCGGGGCTCCTATTCTTATGTGGTGCAGGATCCTCTGGAATGACTATGAT  
 TTAATGGCTCAGCCGATCACTCTGGCCCTCAATTCAGGTGCCACAGCCAAATCCAAGACTCTTCT  
 TTGCTGGAGAACACAAATCCGGAATACCCAGCTACAGTCCATGGTGTCTGTTGAGTGGGCTTCGAGA  
 AGCAGGAAGGATTGCCGACCAGTTTTTGGGAGCCATGTACACTTGCCTCGTCAAGCCACACCAGGTGTC  
 CCTGCACAGCAGTCCCAAGTATGTGAGACAGATGGTTCTGAACAGAGAGATCCAACGGCATGTCATCTG  
 CCACGTAAGCAAGCTCTTCTAGCAATACTAGATCCTACTGAGAACTCCATGTCATCAGCTACTGGGACT  
 CCTAGTTTGACAGCAGAGGCTGGCTCCTTTGGCTGACAGCAACTTACCCATTGATTTGGAAGTACAGCTC  
 CATAAAGACTGCTCGAGAAGCAAGTGGTGTGAGATAACCTCTTAGTCTATGGTGTGTTGTTTGT  
 TTTTTTAAATATTTTTGAGAATAAACTTTAAAATAAAAAAAAAAAAAAAAAAAAAA

**Restriction Sites:** AscI-NotI  
**ACCN:** BC059885  
**Insert Size:** 2412 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="#">BC059885</a> , <a href="#">AAH59885</a>
<b>RefSeq Size:</b>	2999 bp
<b>RefSeq ORF:</b>	2412 bp
<b>Locus ID:</b>	99982
<b>Cytogenetics:</b>	4 68.8 cM
<b>Gene Summary:</b>	<p>Histone demethylase that can demethylate both 'Lys-4' (H3K4me) and 'Lys-9' (H3K9me) of histone H3, thereby acting as a coactivator or a corepressor, depending on the context. Acts by oxidizing the substrate by FAD to generate the corresponding imine that is subsequently hydrolyzed. Acts as a corepressor by mediating demethylation of H3K4me, a specific tag for epigenetic transcriptional activation. Demethylates both mono- (H3K4me1) and di-methylated (H3K4me2) H3K4me. May play a role in the repression of neuronal genes. Alone, it is unable to demethylate H3K4me on nucleosomes and requires the presence of RCOR1/CoREST to achieve such activity. Also acts as a coactivator of androgen receptor (ANDR)-dependent transcription, by being recruited to ANDR target genes and mediating demethylation of H3K9me, a specific tag for epigenetic transcriptional repression. The presence of PRKCB in ANDR-containing complexes, which mediates phosphorylation of 'Thr-6' of histone H3 (H3T6ph), a specific tag that prevents demethylation H3K4me, prevents H3K4me demethylase activity of KDM1A. Demethylates di-methylated 'Lys-370' of p53/TP53 which prevents interaction of p53/TP53 with TP53BP1 and represses p53/TP53-mediated transcriptional activation (By similarity). Demethylates and stabilizes the DNA methylase DNMT1. Required for gastrulation during embryogenesis. Component of a RCOR/GFI/KDM1A/HDAC complex that suppresses, via histone deacetylase (HDAC) recruitment, a number of genes implicated in multilineage blood cell development. Effector of SNAI1-mediated transcription repression of E-cadherin/CDH1, CDN7 and KRT8. Required for the maintenance of the silenced state of the SNAI1 target genes E-cadherin/CDH1 and CDN7.[UniProtKB/Swiss-Prot Function]</p>