

## Product datasheet for RR211283

### Aox1 (NM\_019363) Rat Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** Aox1 (NM\_019363) Rat Tagged ORF Clone  
**Tag:** Myc-DDK  
**Symbol:** Aox1  
**Vector:** pCMV6-Entry (PS100001)  
**E. coli Selection:** Kanamycin (25 ug/mL)  
**Cell Selection:** Neomycin  
**ORF Nucleotide Sequence:** >RR211283 representing NM\_019363  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCCCGATCGCC

ATGGATCCCCCGAGCTGCTCTTCTACGTGAATGGCCAGAAGGTGGTAGAAAACAATGTTGATCCTGAGA  
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 ACAGCATGCAAGGCTGGTTTTGGATGAAGTACCCTTGCAGGTTACAGTCTGCTGGTGGGAAGGTGGAGTTCA  
 AGAGGACCCTCATCATCAGTTCCTTTTCAAGTTCTACCTGGAGGTGCTGCAGGGTCTGAAGAGGGAGGA  
 CCCAGGTCATCTAGCTTGACAAACAATTATGAGAGTGCTTTAGAAGATCTCCATTCAAAACATCAC



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TGGAGAACATTAACCCACCAGAACGTGGATTTCGATGCAGCTTCCTCAGGACCCAATTGGCCGTCCCATCA  
TGCACCTTTCTGGTATTAAGCACGCTACCGGCGAGGCCATCTACTGTGACGACATGCCTGCAGTAGACCG  
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ATGTGGAGCACTATTGCAATGGAGGGAGCTCCCTGGATGAGTCTTATGGGTGATAGAAATGGGGCTTCT  
GAAGATGGACAACGCTTACAAGTTTCCCAATCTACGCTGCCGGGCTGGGCTGCAGAACCAACCTCCCG  
TCCCACACTGCTCTGCGTGGGTTTGGCTTTCCTCAGGCAGGGCTGGTCACCGAAGCTGTGTACAGAAAG  
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CCATTACAAGCAAGAATTAGCGCCAAGACCCTTTTGTAGTGTGGAGAGAATGCATGGCCAAGTGTTC  
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ACAAGGATGACGACGATAAGGTTAA

**Protein Sequence:** >RR211283 representing NM\_019363  
 Red=Cloning site Green=Tags(s)

MDPPQLLFYVNGQKVVENNVDPEMMLLPYLKLNLRITGTYKCGGGGGCGACTVMISRYNPSTKSIRHHPV  
 NACLTPICSLYGTAVTTVEGIGNTRTRLHPVQERIAKCHSTQCGFCTPARVMSMYALLRNHPEPSLDQLT  
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 WRTLTHQNVDMSQLPQDPIGRPIMHLSGIKHATGEAIYCDMPAVDRELFLTFVTSSRAHAKIVSIDLSE  
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 GGRHPYLKGYKVGFMRDGRIVALDVEHYCNGGSSLDESLWVIEMGLLKMDNAYKFPNLRRCRWACRNLNLP  
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 YSERKTA VGKFN AENSWKRGMAVIPLKFPVGVGSVAMGQAAALVHIYLDGSALVSHGGIEMGQGVHTKM  
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 NPALDIGQVEGAFIQGMGLYTI EELSYSPQGILYSRGNQYKIPAI CDIPTEMHISFLPPSEHSNTLYSS  
 KGLGESGVFLGCSVFLAIHDAVRAARQERGISGPWKL TSPLTPEKIRMACE DKFRKMI PRDEPGSYVPWN  
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TRTRPLEQKLISEEDLAANDILDYKDDDDKV

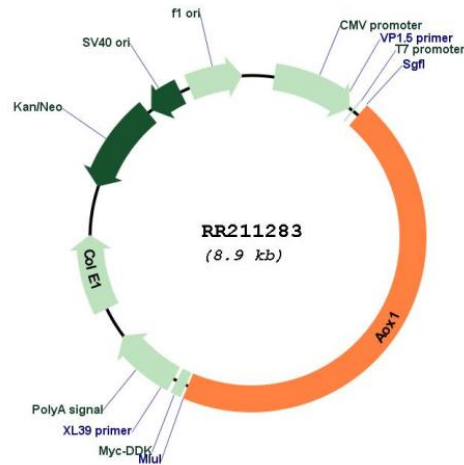
**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**



## Plasmid Map:



ACCN: NM\_019363

ORF Size: 3999 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\\_019363.3](#), [NP\\_062236.2](#)

RefSeq Size: 4303 bp

RefSeq ORF: 4002 bp

Locus ID: 54349

UniProt ID: [Q9Z0U5](#)

Cytogenetics: 9q31

**MW:** 147 kDa

**Gene Summary:** Oxidase with broad substrate specificity, oxidizing aromatic azaheterocycles, such as N1-methylnicotinamide, N-methylphthalazinium and phthalazine, as well as aldehydes, such as benzaldehyde, retinal, pyridoxal, and vanillin. Plays a role in the metabolism of xenobiotics and drugs containing aromatic azaheterocyclic substituents. Participates in the bioactivation of prodrugs such as famciclovir, catalyzing the oxidation step from 6-deoxypenciclovir to penciclovir, which is a potent antiviral agent. Is probably involved in the regulation of reactive oxygen species homeostasis. Is a prominent source of superoxide generation via the one-electron reduction of molecular oxygen. Also catalyzes nitric oxide (NO) production; under anaerobic conditions, reduces nitrite to NO with NADH or aldehyde as electron donor, but under aerobic conditions, NADH is the preferred substrate. These reactions may be catalyzed by several isozymes. May play a role in adipogenesis.[UniProtKB/Swiss-Prot Function]