

## Product datasheet for **RR211436**

### **Orc2 (NM\_001012003) Rat Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Orc2 (NM_001012003) Rat Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Orc2
Synonyms:	Orc2l
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>RR211436 representing NM\_001012003  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGAGCACACTGCGGTTAAAGGAAGCCAAGGTGCCAAGCGTTCAGTTTGTGGGAGATGACGATGTTCTTA  
 GTCACATTCTGGATAGAGAAGGAGGAACATAAATAAAGAAGGAGAAAGTTCAGCTTTTGGTCAATCCCCA  
 GAAAGTAATAAAGAAGGCAGAATGTGAATTAGAGAAAAGTGACCTGGAAGTCTTAGAGGATCAGAACTAC  
 GTGGAAGTCTTGGGAAGAAATATCAAGAATCCTTGGGAAATGGCTCTGCTGTAGATGGTAGGAATAAAG  
 TTTATTCTTTTCAACACAGAAAACACCCTGAAGAGATGACTAAATTGGCTTTAGAAGTGGCAAAAACATC  
 AGGAAAAATTGATCCACTTGCCCTCAAACGATCCTAAAATCACGAAAAACATTGCTCGAAAAAGCAAAGGG  
 CATTCTTCAGAGAAAGCTCCGCTGGAGAACAATAACAAAAATGAATTTCCGTCATAACAACCTCATAATG  
 TAAGAAAAAGATTAATAGCATCAAGGTCTCATTGTGACAGTGAAGTGAATATTCTGCTCCAGCTCAGA  
 AGATGATGAAGAGGTTGCAAAAGACGATGAAGAAGACACTAATGTGGTCAGGTGCTCGAAAAAGAGTCAA  
 GGTCAGAATAGACTACTTCCAGCTCCTGTTTCCAAGAGATACTGCCCAAGAAAAGGAAGAGAGACAAAAG  
 CAGGTGACTTGGTAGAAGAATATTTTGAAGCCACAGTAGTTCAAAAGTCTTAACGCTCTGATAGAACGCT  
 GCAGAAGCTGAGGAGAGCGAGAGTGGACCAGAAAACCTCTGCGTAACTTACTGAGCAAATTTGTGCCTTCC  
 TTTTCTACTGAAATTTGGACAGTTGAATCAACAGCATGAGAGATTGTTTGAATAAGTGGATACTACAGTTAC  
 GCCTTGGGTTCAACATTGTGCTTATGGTTTGGGGTCTAAGAGAGATTTACTAGAAAAGTTTCAAGTAC  
 CATGCTTCAAGATTCCATTGATGTTGTCATCAACGGCTTCTTCCGTCATCAGTGTAAAATCAATCCTG  
 AACTCTAATACTGAAGATGTCCTCAGTCACATGGGTACTTTCCAAAGTGTCTGGATCAGCGAGACTGGA  
 TAATGAACAGATTTAAAGAAGATTCTTCTTTAGAAGTCTTCTTCTTATCCACAATTTGGATAGCCAGAT  
 GTTAAGAGGAGACAATAGCCAGCAAATCTTGGACAGTTGTCATCCTTAGTAATGTGTATCTCATAGCA  
 TCTATCGACCACCTCAATGCTCCTCTCATGTGGGATCATGCAAAGCAGAGTCTGTACAATTGGCTGTGGT  
 ATGAAACCACTACATACAGTCTTACACCGAAGAAACCTCCTATGAGAACTCCCTTTTGGTTAAACAGTC  
 TGGATCTCTACCACTGAGTTCTCTGATTGATGCTTACGAAGCCTTACACCCAATGCAAGGGGGATTTTC  
 AGGCTACTTATGAAGTACCAACTGGATAACCAGGACTGCCCTTCTACATTGGACTTTCTTTTCAAGATT  
 TTTACCAGCAGTGTGGGAAGCATTCTTGTAAACAGTATCTCACACTCCGAGCCAGTAACTGAATT  
 TAGGGACCACAACTTATAAGAACGAAGAAGGAACTGATGGTGTGGAGTATTTATTAATCCTGTTGAC  
 AGCGGAACATTGGCCGATTTCTTGGAGAAGGAGGAGGAGGAGTTCG

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RR211436 representing NM\_001012003  
 Red=Cloning site Green=Tags(s)

MSTLRLKEAKVPSVQFVGDVVLSHILDREGGTLKKEKQVLLVNPQKVIKKAECELEKSDLEVLEDQNY  
 VEVLGRNIQESLNGSAVDGRNKVYSFQHRKHPEEMTKLALAKTSKIDPLASNDPKITKNIARKSKG  
 HSSEKAPLENNKNEFPSIQPHNVRKRLIASRSHCDSESEYSASSEDEEVAKDDEEDTNVVRCSKKSQ  
 GQNRLLPAPVSKEILPKKRKRDKAGDLVEEYFEAHSSSKVLTSDRTLQKLRRARVDQKTLRNLKSFVPS  
 FSTEIGQLNQHERLFDKWILQLRLGFNIVLYLGLGSKRDLEKFRFTMLQDSIHVVINGFFPGISVKSIL  
 NSITEDVLSHMGTFQSVLDQRDWMNRFKEDSLELFLLIHNLDLQMLRGDNSQQLGQLSSLRNVYLIA  
 SIDHLNAPLMWDHAKQSLYNWLWYETTTYSPTYEETSYSNSLLVKQSGSLPLSSLIHVLRSLTPNARGIF  
 RLLMKYQLDNQDCPSYIGLSFQDFYQCREAFLVNSDLTLRAQLTEFRDHKLIRTKKGTGVEYLLIPVD  
 SGTLADFLKEEEEEES

**TR**TRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:**

Sgfl-MluI

Cloning Scheme:



ACCN: NM\_001012003

ORF Size: 1728 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\\_001012003.1](#), [NP\\_001012003.1](#)

RefSeq Size: 1821 bp

RefSeq ORF: 1731 bp

Locus ID: 301430

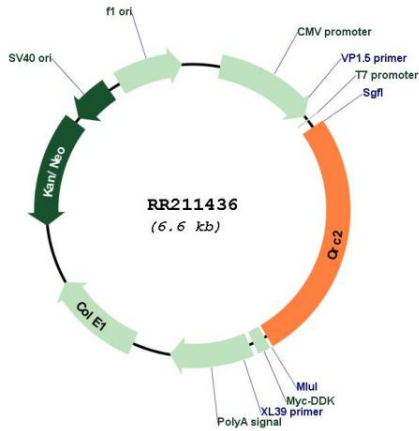
UniProt ID: [Q75PQ8](#)

Cytogenetics: 9q31

**MW:** 65.8 kDa

**Gene Summary:** Component of the origin recognition complex (ORC) that binds origins of replication. DNA-binding is ATP-dependent. The specific DNA sequences that define origins of replication have not been identified yet. ORC is required to assemble the pre-replication complex necessary to initiate DNA replication (By similarity). Binds histone H3 and H4 trimethylation marks H3K9me3, H3K20me3 and H4K27me3. Stabilizes LRWD1, by protecting it from ubiquitin-mediated proteasomal degradation. Also stabilizes ORC3 (By similarity).[UniProtKB/Swiss-Prot Function]

**Product images:**



Circular map for RR211436