

## Product datasheet for **MR211192**

### **Ccar2 (NM\_146055) Mouse Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Ccar2 (NM_146055) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Ccar2
Synonyms:	2610301G19Rik; Dbc1; mKIAA1967
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide  
Sequence:

>MR211192 ORF sequence  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCCCGCATCGCC

ATGTCCCAGTTTAAAGCGCAGAGGATCAACCCACTTCCAGGGGGACGCAACTTCTCAGGCGCAGCTTCAA  
CATCTCTTTTGGGCCCTCCCCCTGGTCTACTTACTCCTCCTGTGGCCACAGACCTGTCCAAAATGCCAG  
GCACCTTCAGAGTGGGGAAAAGCAGCGAGTCTTACAGGCATTGTTACCAGCTTGCATGACTACTTTGGG  
GTGGTAGATGAAGAAGTCTTTTTTCAGCTAAGTGTGGTGAAGGGTCGACTGCCCCAGCTGGGGGAGAAGG  
TGCTGGTGAAGGCCGATACAACCCAGGCCAGGCCGTGCCCTGGAATGCTGTCAAGGTGCAGACGCTCTC  
CAACCAGCCCTTACTGAAGTCTCCAGCGCCTCCCCTTCTGCACGTGCCAGCTCTGGGCCAGAAGCAAGGG  
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TGGAAGGCTGGACCAGGGCCGAAGTGTACTGACTGCAAGAAACGCAACAGCGGGCTGGCGGAGAG  
CCTTGGGGTGCTAAGAAACCTAGGCATGACCTGTCTCCTTACCGGTTTACTCTACTCCCTATACTGTGG  
ACAGTCCCACCTGTGACTTCTAGAACTGCAGCGACGTTACCGCAGCCTGTTGGTCCCCTCAGATTTCTT  
TTCCGTTCACTTGAGCTGGCTGTGAGCCTTCCCTCTGGGCCAGCCCTTTTCCCTCCACCACCAAGTCGG  
ATCCAGGTCTCTTCCAGAGAAGGAGGCAGCTCCAGACACTGGTGTGAGCCAGCCCTGAGGACAGTGACC  
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AGGCAGACCCGACAGTGTGGTGGCAGCCATCCGCTGTGCACAAGCCAGACTGGCATTGAGTGTGAG  
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TCCTGATGTGTCAGAGCAAGCAGACACTTAAACAGAACACAGAGACAATGGAGGCCACCACACAGCAA  
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GAGGAAAAGGCCCGGGGCGAGGGCGGCTGAGGACCTCTGTGAGATGGCCTTGGACCAGACCTGCTGCTGC  
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CCTGAAGACGTGCTCTTCGGAAAACCTGGATCTACTGCCTCCTTACAGGAAAGAGCACAAAGCCAGGTGCTG  
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GATGCAGGACTTCCGACGGCCTGACCCACTGCACCTTGTGATGCAGCGGATTGTTGAGAAGGCTGAC  
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ACAAGGATGACGACGAT AAGGTTTAA

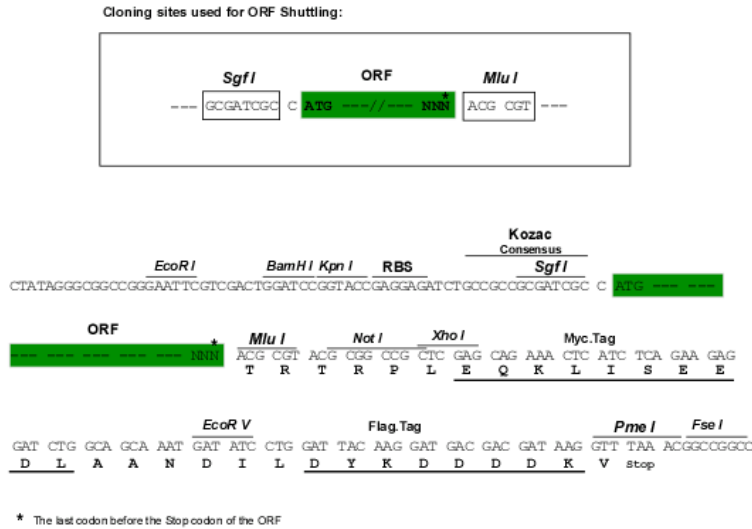
Protein Sequence: >MR211192 protein sequence  
 Red=Cloning site Green=Tags(s)

MSQFKRQRINPLPGRNFSGAASTSLLGPPPGLLTPPVATDLSQNAHLQSGEKQRVFTGIVTSLHDYFG  
 VVDEEVFFQLSVVKGRPLQLGEKVLVKAAYNPGQAVPWNVAVKVTLSNQPLLKSPAPLLHVAALGQKQG  
 ILGAQPQLIFQPHRIPPLFPQKPLSLFQTSHLHL SHLNRFPARGPHGRLDQGRSDDYDKKRQRAGGE  
 PWGAKKPRHDLSPYRVHLTPYTVDSPTCDFLELQRRYRSLVPSDFLSVHLSWLSAFPLGQPFSLHHP  
 IQVSSEKEAAPDTGAEPSPEDSDPTYSSKVLSSPGLLEEFYRCCMLFVDDMAEPRETPEHPLKQLKFL  
 GRKEEEAVLVGGEWSPSLDGLDPQADPQVLRVTAIRCAQAQTGIDLSTCTKWRWF AEFQYLQPGPPRQLH  
 TVVVYLPDVWTIMPTLEEWEALCQKATEAAPQPHEASGEAEATEQAPDVSEQADTSKQNTETMEATTQQ  
 DVDTDLPEAPPPLEPAVMARPCVNL SLYGIVEDRRPKERISFEVVVLAELFVEMLQRDFGYRIYKTL  
 SLPEKVVSPPEPEKEEAAKEDAVKEEEAVKEEAVKVKDEQNEGTAAESDPLKEDGLPKRPSSGEE  
 EEKARGEAAEDLCEMALDPDLLLRDDGEDEFAGAKLEETEVRVSVASNQSEMEYSSLQDMPKELDPSTVL  
 PLDCLLAFVFFDANWCGYLHRRDLERVLLTLGIRLSAEQAKQLVSRVVAQNICQYRSLQYSRAEVLDDGL  
 PEDVLFGNLDLLPPSGKSTKPGAAPTEHKGLVPHNGSLINVGSLLRQAEQQDSGRLYLENKIHTLELKLE  
 ESHNRFSAEVTNKTAAEMQELRARLAEAEETARTAEKQKQLQRQMDFRRRLTPLHLEMQRIVEKAD  
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TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: SgfI-MluI

Cloning Scheme:



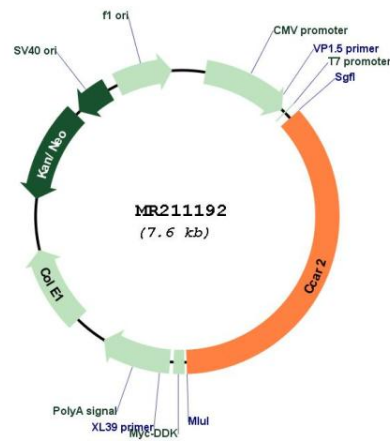
ACCN: NM\_146055

ORF Size: 2769 bp

<b>OTI Disclaimer:</b>	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. <a href="#">More info</a>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<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_146055.3</a> , <a href="#">NP_666167.3</a>
<b>RefSeq Size:</b>	3705 bp
<b>RefSeq ORF:</b>	2769 bp
<b>Locus ID:</b>	219158
<b>UniProt ID:</b>	<a href="#">Q8VDP4</a>
<b>Cytogenetics:</b>	14 D2
<b>MW:</b>	103 kDa

**Gene Summary:**

Core component of the DBIRD complex, a multiprotein complex that acts at the interface between core mRNP particles and RNA polymerase II (RNAPII) and integrates transcript elongation with the regulation of alternative splicing: the DBIRD complex affects local transcript elongation rates and alternative splicing of a large set of exons embedded in (A + T)-rich DNA regions. Inhibits SIRT1 deacetylase activity leading to increasing levels of p53/TP53 acetylation and p53-mediated apoptosis (By similarity). As part of a histone H3-specific methyltransferase complex may mediate ligand-dependent transcriptional activation by nuclear hormone receptors (By similarity). Inhibits SUV39H1 methyltransferase activity. Plays a critical role in maintaining genomic stability and cellular integrity following UV-induced genotoxic stress (By similarity) Regulates the circadian expression of the core clock components NR1D1 and ARNTL/BMAL1. Enhances the transcriptional repressor activity of NR1D1 through stabilization of NR1D1 protein levels by preventing its ubiquitination and subsequent degradation. Acts as a regulator of PCK1 expression and gluconeogenesis by a mechanism that involves, at least in part, both NR1D1 and SIRT1 (PubMed:24415752). Negatively regulates the deacetylase activity of HDAC3 and can alter its subcellular localization (PubMed:21030595). Plays an important role in tumor suppression through p53/TP53 regulation; stabilizes p53/TP53 by affecting its interaction with ubiquitin ligase MDM2 (PubMed:25732823). Represses the ligand-dependent transcriptional activation function of ESR2. Positively regulates the beta-catenin pathway (canonical Wnt signaling pathway) and is required for MCC-mediated repression of the beta-catenin pathway. Represses ligand-dependent transcriptional activation function of NR1H2 and NR1H3 and inhibits the interaction of SIRT1 with NR1H3. Represses the transcriptional activator activity of BRCA1. Inhibits SIRT1 in a CHEK2 and PSEM3-dependent manner and inhibits the activity of CHEK2 in vitro (By similarity).[UniProtKB/Swiss-Prot Function]

**Product images:**

Circular map for MR211192