

## Product datasheet for **RG231425**

### **ORC1 (NM\_001190819) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	ORC1 (NM_001190819) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	ORC1
Synonyms:	HSORC1; ORC1L; PARC1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG231425 representing NM\_001190819  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGCACACTACCCACAAAGGCTGAAGACCAGAAAACTTATTCATGGGTGGCAGGCCCTTGTGGATC  
 GAAAACCTGCACTACCAAACCTATAGAGAAATGTGTGTGAAAACAGAAGGTTGTTCCACCGAGATTCACAT  
 CCAGATTGGACAGTTTGTGTTGATTGAAGGGGATGATGATGAAAACCCGATGTTGCTAAATGCTTGAG  
 TTGTTCTGAAGATGACTCTGATCCTCCTCCTAAGAAACGTGCTCGAGTACAGTGGTTGTCCGATTCTGTG  
 AAGTCCCTGCCTGTAACCGCATTTGTTGGGCCGGAAGCCTGGTGCACAGGAAATATTCTGGTATGATTA  
 CCCGGCCTGTGACAGCAACATTAATGCGGAGACCATCATTGGCCTTGTTCGGGTGATACCTTTAGCCCCA  
 AAGGATGTGGTACCGACGAATCTGAAAAATGAGAAGACTCTTTGTGAAACTATCCTGGAATGAGAAGA  
 AATTCAGGCCACTTTCTCAGAATAATTGCGGAGTTGAATAAACCAAGAGAGTGCAGCCAAGTGCCA  
 GAAACCCGTGAGAGCCAAGAGTAAGAGTGCAGAGAGCCCTTCTTGACCCAGCAGAACATGTGGCCAAA  
 AGGATTGAATCAAGGCCTCCGCTCCTCAATCTCGCCAACTCCTACCATCCTCTTACCCCAAGAGCCA  
 GAAAGAGGCTGGAGCTTGCAACTTAGGTAACCCCTCAGATGTCCCAGCAGACTTCATGTGCCCTCCTTGGA  
 TTCTCCAGGAAGAATAAAACGAAAAGTGGCCTTCTCGGAGATCACCTCACCTTCTAAGAGATCTCAGCCT  
 GATAAACTTCAAACCTTGTCTCCAGCTCTGAAAGCCCCAGAGAAAACAGAGAGACTGGACTCTCTTATA  
 CTGAGGATGACAAGAAGGCTTCACTGAACATCGCATAATCCTGAGAACCCGAATTGCAGCTTCGAAAAC  
 CATAGACATTAGAGAGGAGAGAACAATTACCCCTATCAGTGGGGACAGAGATCTTCAAGTGGTGCATCC  
 GTGATTTCTGAAACCAGAAAACATCAAAAAGAGGGATGCAAAAAGAAGCAAAAAGCCAGAATGAAGCGACT  
 CTACTCCCATCGTATCCGACAGAAAGATTCTGTCTTGACTATGAATCGGATTAGCAGCAGCTTCGGTT  
 TCTAGGTAATAGTAAAAGTGACCAAGAAGAGAGATTCTGCCAGCAGCAGAGATTTCCAGACTCTAGC  
 AGTGACGAAGAAGAGGCTTCCACACCGCCCTTCCAAGGAGAGCACCAGAACTGTGCCAGGAACCTGC  
 GATCTTCTTGAAGTCACTTACATACCTCACGAAGCTCAAGCCTAGAACCACCCAGTTGTGCCCTCC  
 TCAGATCCGTAGTCAAGCCTGGCTGCCAGGAGCCAGCCAGTGTGCTGGAGGAAGCCGACTGAGGCTG  
 CATGTTTCTGCTGTACCTGAGTCTTCCCTGTCCGGAACAGGAATCCAAGACATCTACAATTTTGTGG  
 AAAGCAAACTCCTTGACCATACCGGAGGGTGCATGTACATCTCCGGTGTCCCTGGACAGGGAAGACTGC  
 CACTGTTCAATGAAGTATACGCTGCCTGCAGCAGGCCAAGCCAATGATGTTCTCCCTTTCAATAC  
 ATTGAGGTCAATGGCATGAAGCTGACGGAGCCCCACCAAGTCTATGTGCAAACTTGCAGAAGCTAACAG  
 GCCAAAAAGCAACAGCAACCATGCGGCAGAACTGCTGGCAAAGCAATTCTGCACCCGAGGGTCACTCA  
 GGAAACCACCGTCTGCTTGTGGATGAGCTCGACCTTCTGTGGACTCACAAAACAAGACATAATGTACAAT  
 CTCTTTGACTGGCCCACTATAAGGAGGCCCGGCTTGTGGTCTGGCAATTGCCAACACAATGGACCTGC  
 CAGAGCGAATCATGATGAACCGGTGTCCAGCCGACTGGGTCTTACCAGGATGTGCTTCCAGCCCTATAC  
 ATATAGCCAGCTGCAGCAGATCCTAAGTCCCAGCTCAAGCATCTAAAGGCCTTTGAAGATGATGCCATC  
 CAGCTGGTAGCCAGGAAGGTAGCAGCACTGTCTGGAGATGCACGACGGTGCCTGGACATCTGCAGGCGT  
 CCACAGAGATCTGTGAGTTCTCCAGCAGAAGCCTGACTCCCTGGCCTGGTACCATAGCCCACTCAAT  
 GGAAGCTGTGGATGAGATGTTTTCATCATACATCACGGCCATCAAAAATTCCTGTGTTCTGGAACAG  
 AGCTTCTGAGAGCCATCCTCGCAGAGTCCGTCGATCAGGACTGGAGGAAGCCACGTTTCAACAGATAT  
 ATAGTCAACATGTGGCACTGTGCAAGTGGAGGACTGCCGTACCCACCATGTCAGAGACCATGGCCGT  
 GTGTTCTCACCTGGGCTCCTGTCGCTCCTGCTTGTGGAGCCAGCAGGAACGATCTGCTCCTTCGGGTG  
 CGGCTCAACGTCAGCCAGGATGATGTGCTGATGCGCTGAAAGACGAG

**ACGGTACGCGGCCGCTCGAG** - GFP Tag - GTTTAA

**Protein Sequence:** >RG231425 representing NM\_001190819  
Red=Cloning site Green=Tags(s)

MAHYPTRLKTRKTYSWVGRPLLDRKLHYQTYREMCVKTEGCSTEIHIQIGQFVLEGGDDDENPYVAKLLE  
LFEDSDPPPKRARVQWFVRFCEVPACKRHLLGRKPGAQEIFWYDYPACDSNINAETIIGLVRVIPLAP  
KDVVPTNLKNEKTLFVKLSWNEKKFRPLSSELF AELNKPQESAACQKPVRAKSKSAESPSWTPAEHVAK  
RIESRHSASKSRQTPHPLTPRARKRELGNLGNPQMSQQTSCASLDSPGRIKRVAFSEITSPSKRSQP  
DKLQTLSPALKAPEKTRETGLSYTEDDKKASPEHRIILRTRIAASKTIDIREERTLTPISGGQRSSVVP  
VILKPENIKKRDAAKAKAQAQNEATSTPHRIRRKSSVLTMNRIRQQRLFLGNSKSDQEEKEILPAAEISDSS  
SDEEEASTPPLPRRAPRTVSRNLRSSLKSSLHTLTKLKPRTPRCAAPQIRSRSLAAQEPASVLEEARLRL  
HVSAPESLPCREQEFQDIYNFVESKLLDHTGGCMYISGVPGTGKTATVHEVIRCLQQAAQANDVPPFQY  
IEVNGMKLTEPHQVYVQILQKLTGQKATANHAAELLAKQFCTRGSPQETTLLVDELDDLWTHKQDIMYN  
LFDWPTHKEARLVVLAIAANTMDLPERIMMNRVSSRLGLTRMCFQPYTYSQLQQILRSRLKHLKAFEDDAI  
QLVARKVAALSGDARRCLDICRRATEICEFSQQKPDSPGLVTIAHSMEAVDEMFSYITAIKNSSVLEQ  
SFLRAILAEFRSGLLEATFQQIYSQHVALCRMEGLPYPTMSETMAVCSHLGSCRLLLVEPSRNDLLLRV  
RLNVSQDDVLYALKDE

TRTRPLE - GFP Tag - V

**Restriction Sites:** Sgfl-MluI

Cloning Scheme:



ACCN: NM\_001190819

ORF Size: 2568 bp

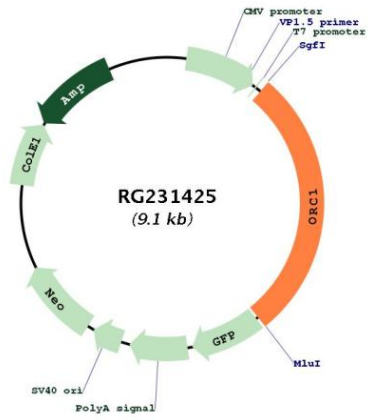
OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially 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).

<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>	<u>NM_001190819.1, NP_001177748.1</u>
<b>RefSeq Size:</b>	3177 bp
<b>RefSeq ORF:</b>	2571 bp
<b>Locus ID:</b>	4998
<b>UniProt ID:</b>	<u>Q13415</u>
<b>Cytogenetics:</b>	1p32.3
<b>Protein Families:</b>	Stem cell - Pluripotency
<b>Protein Pathways:</b>	Cell cycle
<b>Gene Summary:</b>	<p>The origin recognition complex (ORC) is a highly conserved six subunits protein complex essential for the initiation of the DNA replication in eukaryotic cells. Studies in yeast demonstrated that ORC binds specifically to origins of replication and serves as a platform for the assembly of additional initiation factors such as Cdc6 and Mcm proteins. The protein encoded by this gene is the largest subunit of the ORC complex. While other ORC subunits are stable throughout the cell cycle, the levels of this protein vary during the cell cycle, which has been shown to be controlled by ubiquitin-mediated proteolysis after initiation of DNA replication. This protein is found to be selectively phosphorylated during mitosis. It is also reported to interact with MYST histone acetyltransferase 2 (MyST2/HBO1), a protein involved in control of transcription silencing. Alternatively spliced transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jun 2010]</p>

Product images:



Circular map for RG231425