

## Product datasheet for RC210519

### Kappa Opioid Receptor (OPRK1) (NM\_000912) Human Tagged ORF Clone

#### Product data:

|                           |   |
|---------------------------|---|
| Product Type:             | Expression Plasmids   |
| Product Name:             | Kappa Opioid Receptor (OPRK1) (NM_000912) Human Tagged ORF Clone            |
| Tag:                      | Myc-DDK   |
| Symbol:                   | Kappa Opioid Receptor   |
| Synonyms:                 | K-OR-1; KOP; KOR; KOR-1; KOR1; OPRK   |
| Mammalian Cell Selection: | Neomycin  |
| Vector:                   | pCMV6-Entry (PS100001)  |
| E. coli Selection:        | Kanamycin (25 ug/mL)  |
| ORF Nucleotide Sequence:  | >RC210519 representing NM_000912<br>Red=Cloning site Blue=ORF Green=Tags(s) |

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGACTCCCGATCCAGATCTTCCGCGGGGAGCCTGGCCCTACCTGCGCCCGAGCGCCTGCCTGCCCC  
CCAACAGCAGCGCCTGGTTTCCCGGCTGGGCCGAGCCGACAGCAACGGCAGCGCCGGCTCGGAGGACGC  
GCAGCTGGAGCCCGGCACATCTCCCGGCCATCCCGGTCATCATCACGGCGGTCTACTCCGTAGTGTT  
GTCGTGGGCTTGGTGGCAACTCGCTGGTCATGTTGTCGATCATCCGATACACAAAGATGAAGACAGCAA  
CCAACATTTACATATTTAACCTGGCTTTGGCAGATGCTTTAGTTACTACAACCATGCCCTTTCAGAGTAC  
GGTCTACTTGATGAATTCCTGGCCTTTTGGGGATGTGCTGTGCAAGATAGTAATTTCCATTGATTACTAC  
AACATGTTCAACGACATCTTCACCTTGACCATGATGAGCGTGGACCGCTACATTGCCGTGTGCCACCCCG  
TGAAGGCTTTGGACTTCCGCACACCCCTTGAAGGCAAAGATCATCAATATCTGCATCTGGCTGCTGTGCTC  
ATCTGTTGGCATCTCTGCAATAGTCCTTGGAGGCACCAAAGTCAGGGAAGACGTCGATGTCATTGAGTGC  
TCCTTGCAGTTCCAGATGATGACTACTCCTGGTGGACCTTTCATGAAGATCTGCGTCTTCATCTTTG  
CCTTCGTGATCCCTGTCTCATCATCATCGTCTGCTACACCCTGATGATCCTGCGTCTCAAGAGCGTCCG  
GCTCCTTTCTGGCTCCCGAGAGAAAGATCGCAACCTGCGTAGGATCACCAGACTGGTCTGGTGGTGGTG  
GCAGTCTTCGTGCTGCTGGACTCCCATTCACATATTCATCCTGGTGGAGGCTCTGGGGACACCTCCC  
ACAGCACAGCTGCTCTCCAGCTATTACTTCTGCATCGCCTTAGGCTATACCAACAGTAGCCTGAATCC  
CATTCTCTACGCCTTTCTTGATGAAAATTCAAGCGGTGTTTCCGGGACTTCTGCTTTCCACTGAAGATG  
AGGATGGAGCGGCAGAGCACTAGCAGAGTCCGAAATACAGTTCAGGATCCTGCTTACCTGAGGGACATCG  
ATGGGATGAATAAACAGTA

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >RC210519 representing NM\_000912  
Red=Cloning site Green=Tags(s)

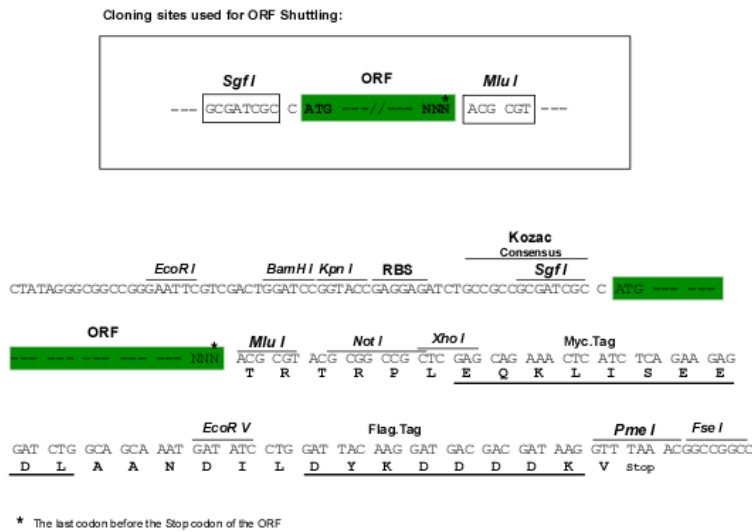
MDSPIQIFRGEPTCAPSACLPPNSSAWFPGWAEPDSNGSAGSEDAQLEPAHISPAIPVIITAVYSVVF  
 VVGLVGNLSVMFVIIRYTKMKATNIYIFNLALADALVTTMPFQSTVYLMNSWPFQDVLCKIVISIDYY  
 NMFTSIFTLTMSVDRIYAVCHPVKALDFRTPKAKIINICIWLLSSSVGISAIVLGGTKVREDVDVIEC  
 SLQFPDDDDYSWDLFMKICVFI FAFVIPVLIIIVCYTLMILRLKSVRLLSGSREKDRNLRRITRLVLVVV  
 AVFVVCWTPIHIFILVEALGSTSHSTAALSSYFICIALGYTNSSLNPILYAFLDENFKRCFRDFCFPLKM  
 RMERQSTSRVRNTVQDPAYLRDIDGMNKPV

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mg2417\\_a02.zip](https://cdn.origene.com/chromatograms/mg2417_a02.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_000912

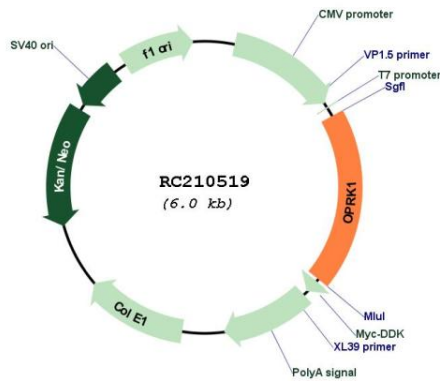
**ORF Size:** 1140 bp

**OTI Disclaimer:** Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at [custsupport@origene.com](mailto:custsupport@origene.com) or by calling 301.340.3188 option 3 for pricing and delivery.

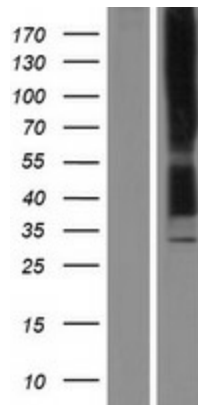
The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

|                               |  |
|-------------------------------|--|
| <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>Note:</b>                  | Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.   |
| <b>RefSeq:</b>                | <a href="#">NM_000912.5</a>  |
| <b>RefSeq Size:</b>           | 4959 bp  |
| <b>RefSeq ORF:</b>            | 1143 bp  |
| <b>Locus ID:</b>              | 4986   |
| <b>UniProt ID:</b>            | <a href="#">P41145</a>   |
| <b>Cytogenetics:</b>          | 8q11.23  |
| <b>Domains:</b>               | 7tm_1  |
| <b>Protein Families:</b>      | Druggable Genome, GPCR, Transmembrane  |
| <b>Protein Pathways:</b>      | Neuroactive ligand-receptor interaction  |
| <b>MW:</b>                    | 42.5 kDa   |
| <b>Gene Summary:</b>          | This gene encodes an opioid receptor, which is a member of the 7 transmembrane-spanning G protein-coupled receptor family. It functions as a receptor for endogenous ligands, as well as a receptor for various synthetic opioids. Ligand binding results in inhibition of adenylate cyclase activity and neurotransmitter release. This opioid receptor plays a role in the perception of pain and mediating the hypolocomotor, analgesic and aversive actions of synthetic opioids. Variations in this gene have also been associated with alcohol dependence and opiate addiction. Alternatively spliced transcript variants encoding different isoforms have been found for this gene. A recent study provided evidence for translational readthrough in this gene, and expression of an additional C-terminally extended isoform via the use of an alternative in-frame translation termination codon. [provided by RefSeq, Dec 2017] |

Product images:



Circular map for RC210519



Western blot validation of overexpression lysate (Cat# [LY400331]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC210519 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).