

Product datasheet for **RR205432**

Per2 (NM_031678) Rat Tagged ORF Clone

Product data:

| | |
|--------------------------|---|
| Product Type: | Expression Plasmids |
| Product Name: | Per2 (NM_031678) Rat Tagged ORF Clone |
| Tag: | Myc-DDK |
| Symbol: | Per2 |
| Synonyms: | rPER2 |
| Vector: | pCMV6-Entry (PS100001) |
| E. coli Selection: | Kanamycin (25 ug/mL) |
| Cell Selection: | Neomycin |
| ORF Nucleotide Sequence: | >RR205432 representing NM_031678 Red=Cloning site Blue=ORF Green=Tags(s) |

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGAATGGATATGTGGACTTTTCCCAAGTCCCACCAGCCCCACCAAGAGCCAGGGGAGCCTCAACCA
CCCAGGCTGTGCTCCAGGAAGACGTGGACATGAGCAGCGGCTCCAGCGGAAATGAAAAGTCTCCACGGG
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ACTCACCCAGCCCTGACGATACCTTCAGACTCATGATGACAGAGCGGAGCATAAACCCCTCCACAAGCG
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GGTCCACCTCCCTGCAGACAAGAAGGCCAAGGGGAAGGCCAGCACGCTGGCAACCTTGAAGTACGCTCTG
CGGAGCGTGAAGCAGGTGAAGGCTAATGAGGAGTACTACCAGCTGCTAATGTCCAGTGAGAGCCAGCCCT
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CTCGGACATGTTTGTGTGGCTGTGTCCCTGGTCTCTGGGAAGATCCTGTACATCTCAACCAAGTCGCC
CCCATCTTTCAGTGAAGAAGGACGCCTCAGTGATGCCAAGTTTGTGGAGTTCCTGGCTCCCCATGACG
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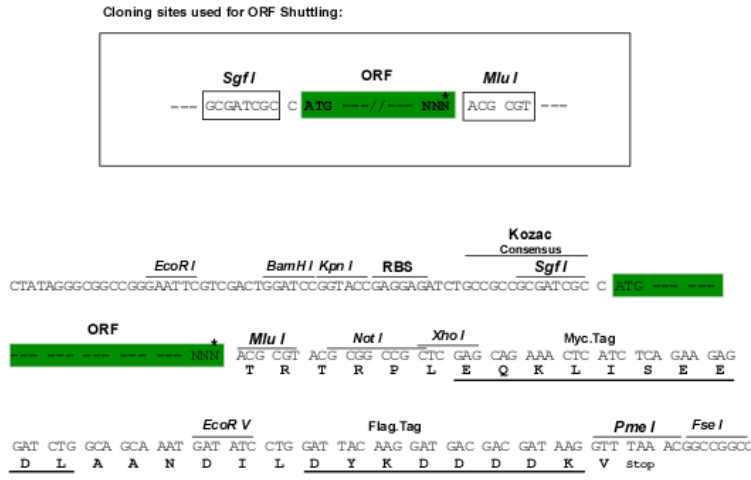
Protein Sequence: >RR205432 representing NM_031678
 Red=Cloning site Green=Tags(s)

MNGYVDFSPSPSTPTQEPGEPQPTQAVLQEDVDMSSGSSGNENCSTGRDSQGSDCDDSGKELRMLVESSN
 THPSDDTFRLLMTEAEHNPSTSGCSSEQSAKADAHKELIRTLRELKVHLPADKKAKGKASTLATLKYAL
 RSVKQVKANEYYQLLMSSESQPCSVDPVSYTMEQVEGITSEYIVKNSDMFAVAVSLVSGKILYISNQA
 PIFHCKKDAFSDAKFVEFLAPHDVSFHSYTPPYKLPVWSVSSGLDSFTQECMEEKSFFCRVSVGKHEN
 EIRYQPFMRTPYLKVKQEQAASQLCCLLLAERVHSGYEAPRIPPEKRIFTTHTPNCLFQDVERAVP
 LLGYLPQDLIETPVLVQLHPSDRPLMLAIHKILQASGQPFDPYSPIRFRTRNGEYITLDTSSSFINPWS
 RKISFIIGRHKVRVGPLNEDVFAASPCPEEKTPHPSVQELTEQIHRLLMQPVPVPHSGSSGYSLGNSGHE
 HLMSQTSSSDSNGQEEHWRRSIGFKTSQKSHFSPESGGQKEASVAEMQSSPPAQRVSVTTMERDS
 SGASLPKASFPEELTYKSQPPCSYQQISCLDSVIRYLESCNEAATLKRKCEFPANIPSRKATVSPGLHSG
 EAARSSKVTSHTEVSAHLSSLALPGKAESVSLTSQCSYSSTIVHVGDKKQPELETVEDVASGPESQDD
 AAGGLSQEKSLQKLGKTKEVLAHTQREEQGLQRFREVSRLGALQAHCQNYLQERSRAPASDRGLRNA
 SGIESSWKKTGKNRKLKSKRVKTRDSESTGSGGPVSHRPPLVGLNATAWSPSDTSQSSCPAPFPAPVP
 AYPLPVFPAPGIVSTPGTVVAPAAAHTGFTMPVPMGTQPEFAVQPLPFAAPLAPVMAFMLPSYFPFA
 TPNLPAQAFSPQPHFAHPTLASEITPASQAEFSPRTSMLRQPCACPVTTPAGTVALGRASPPLFQSRGS
 SPLQLNLLQLEEAPESSTGAAGTLGTTGTAASGLDCTSGASRDRQPKAPPTCSEPSDTQNSDAISTSSDL
 LNLLLGEDLCSATGSALSRGASATSDSLGSSSLGCDTSRSGAGSSDTSHTSKYFGSIDSENHAKKMI
 TDTEESEQFIKYVLQDPDWLLMANTDDNIMTYQLPSRDLQAVLKEDQEKLKLLQRSQPHFTEGQRREL
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TRTRPLEQKLISEEDLAANDILDYKDDDDKV

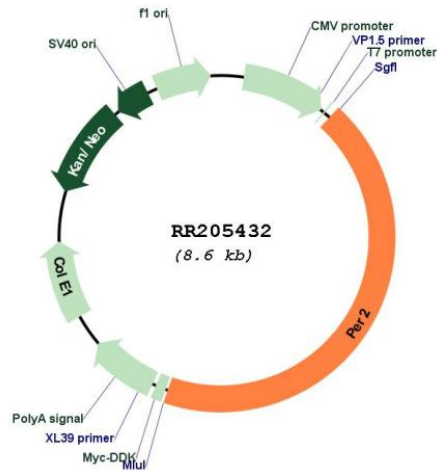
Restriction Sites: SgfI-MluI

Cloning Scheme:



* The last codon before the Stop codon of the ORF

Plasmid Map:



ACCN: NM_031678

ORF Size: 3771 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_031678.1](#), [NP_113866.1](#)

RefSeq Size: 5761 bp

RefSeq ORF: 3774 bp

Locus ID: 63840

UniProt ID: [Q9Z301](#)

Cytogenetics: 9q36

MW: 136 kDa

Gene Summary: This gene is a member of the Period family of genes and is expressed in a circadian pattern in the suprachiasmatic nucleus, the primary circadian pacemaker in the mammalian brain. Genes in this family encode components of the circadian rhythms of locomotor activity, metabolism, and behavior. This gene is upregulated by Clock/Arntl heterodimers but then represses this upregulation in a feedback loop using Per/Cry heterodimers to interact with Clock/Arntl. Polymorphisms in this gene may increase the risk of getting certain cancers and have been linked to sleep disorders. [provided by RefSeq, Jan 2014]