

Product datasheet for **RG217739**

PER3 (NM_016831) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	PER3 (NM_016831) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	PER3
Synonyms:	FASPS3; GIG13
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG217739 representing NM_016831 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGCCCGCGGGGAAGCTCCTGGCCCCGGGAGACGGGGGGCTAAGGACGAGGCCCTGGGCGAAGAATCGG
GGGAGCGGTGGAGCCCCGAGTTCATCTGCAGAGGAAATTGGCGGACAGCAGCCACAGTGAACAGCAAGA
TCGAAACAGAGTTTCTGAAGAATTATCATGGTTGTCCAAGAAATGAAAAAATACTTCCCCTCGGAGAGA
CGCAATAAACCAAGCACTCTAGATGCCCTCAACTATGCTCTCCGCTGTGTCCACAGCGTTCAAGCAAACA
GTGAGTTTTTCCAGATTCTCAGTCAGAATGGAGCACCTCAGGCAGATGTGAGCATGTACAGTCTTGAGGA
GCTGGCCACTATCGCTTCAAGACACTTCCAAAAACACAGATACCTTTGTGGCAGTATTTTCATTTCTG
TCTGGAAGGTTAGTGACATTTCTGAACAGGCTGCTTTGATCCTGAATCGTAAGAAAGATGTCTGGCGT
CTTCTCACTTTGTTGACCTGCTTGCACCTCAAGACATGAGGGTATTCTACGCGCACACTGCCAGAGCTCA
GCTTCCTTTCTGGAACAACCTGGACCCAAAGAGCTGCACGGTATGAATGTGCTCCGGTGAACCTTTTTTC
TGCAGGATCCGTGGAGGTGAAGACAGAAAGCAAGAGAAGTGTCACTCCCCATTCCGGATCATCCCCTATC
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GAAGTATGCAGGGCATCTCCCTTTGAACATTCTCCCATTGATTTTGTACTCAAAAACGGAGACTACATC
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CCAGTGGGCACCGTGTGGAGGAGACGAAGCGGAGCAGATGACCTTGAGCAGGTCTATGCCAGTGTGAA
CAAAAATAAAAATCTGGGTCAGCAGCTACATTGAGTCAATGACCAATCATCATTCAAGCCAGTGACG



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GGGACACGCACAGAACCGAATGGTGGTGGTGAATGTAAGACCTTTACTTCCTCCACAAACACTGAAAA
ACAATAGTGTGTACACTGAGCCCTGTGAGGATTTGAGGAACGATGAGCACAGCCATCCTATCAACAGAT
CAACTGTATCGACAGTGTATCAGATACCTGAAGAGCTACAACATTCCAGCTTTGAAAAGAAAGTGTATC
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CACTCAAGAAATCGACATTCAAGCCTGTGTCACTTGTGAAAATGAAGATTCAGCTGATGGTGGCCACACA
TCCTGTGGTCAGGTTCTGGTAGAAGACAGCTGT

ACGCGTACGCGGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >RG217739 representing NM_016831
 Red=Cloning site Green=Tags(s)

MPRGEAPGPRRGAKDEALGEESGERWSPEFHLQRKLADSSHSEQQDRNRVSEELIMVVQEMKKYFPSE
 RKNPSTLDALNYALRCVHSVQANSEFFQILSQNGAPQADVSMYSLEELATIASEHTSKNTDTFVAVFSFL
 SGRLVHISEQAALILNRKKDVLASSHFVDLLAPQDMRVFYAHTARAQLPFWNNWQRAARYECAPVKPFF
 CRIRGGEDRKQEKCHSPFRIIPYLIHVHHPAQPELESEPCCLTVVEKIHSGYEAPRIPVKNKRIFTTTHTP
 GCVFLEVDEKAVPLLGYLPQDLIGTILSYLHPEDRSLMVAIHQKVLKYAGHPPFEHSPIRFCTQNGDYI
 ILDSSWSSFVNPWSRKISFIIGRHKVRTSPLNEDVFATKIKKMNNDNDKIDITELQEIQYKLLLQPVHVS
 SGYGLSGSGSQEQLVSIASSSEASGHRVEETKAEQMTLQQVYASVNIKIKNLGQQLYIESMTKSSFPVT
 GTRTEPNGGGECKTFTSFHQTLKNSVYTEPCEDLRNDEHSPSYQQINCDVIRYLKSNYPALKRRCI
 SCTNTTSSSEEDKQNHKADDVQALQAGLQIPAIKSEMPTNGRSIDTGGGAPQILSTAMLSLGSISQC
 GYSSTIVHVPPPETARDATLFCWPWLNMQPAPLTSEEFKHVGLTAAVL SAHTQKEEQNYVDKFRKILS
 SPYSSYLQQESRSKAKYSYFQGDSTSKQTRSAGCRKGGKHKRKKLPEPPDSSSNTGSGPRRGAHQNAQPC
 CPSAASSPHTSSPTFPPAAMVPSQAPYL VPAFPLPAATSPGREYAAPGTAPEGLHGLPLSEGLQPYPAFP
 FPYLDFTMTVFLPDPVCPLLSPSFLPCPFLGATASSAISPSMSSAMSPTLDPPTVTSQRREEEKWEAQ
 SEGHPFITSRSSPLQLNLLQEEMPRPSESPDQMRRTCPQTEYCVTGNGSESSPATTGALSTGSPPRE
 NPSHTASALSTGSPPMKNPSHTASALSTGSPPMKNPSHTASTLSMGLPPSRTPSHTATVLTGSP
 SESPSRTGSAASGSSDSSIYLTSSVYSSKISQNGQSQDVQKKEFTFPNVAEPIWRMIRQTPERILMTYQ
 VPERVKEVVLKEDLEKLESMRQQPQF SHGQKEELAKVYVNIQSQTVTQEIDIQACVTCENEDSADGAAT
 SCGQVLVEDSC

TRTRPLE - GFP Tag - V

Restriction Sites:

SgfI-MluI

Cloning Scheme:



ACCN: NM_016831

ORF Size: 3603 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 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](#)

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_016831.4](#)

RefSeq Size: 6203 bp

RefSeq ORF: 3606 bp

Locus ID: 8863

UniProt ID: [P56645](#)

Cytogenetics: 1p36.23

Domains: PAS

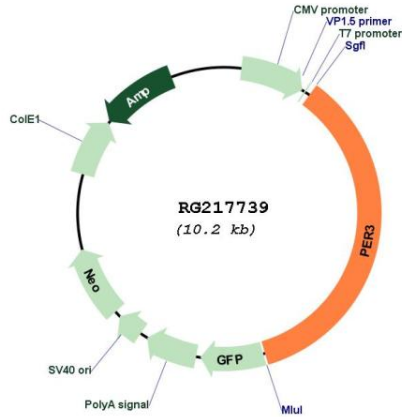
Protein Families: Druggable Genome, Transcription Factors

Protein Pathways: Circadian rhythm - mammal

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 have been linked to sleep disorders. Multiple transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jan 2014]

Product images:



Circular map for RG217739