

## Product datasheet for **RG212581**

### **PAM (NM\_000919) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	PAM (NM_000919) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	PAM
Synonyms:	PAL; PHM
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide  
Sequence:

>RG212581 representing NM\_000919  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGGCTGGCCGCGTCCCTAGCCTGCTAGTTCTCCTTGTGTTTTTCCAAGCAGCTGTTTGGCTTCCGAAGCC  
 CACTTTCTGTCTTTAAGAGGTTTAAAGAACTACCAGACCATTTTCCAATGAATGTCTTGGTACCACCAG  
 ACCCGTAGTTCCTATTGATTCATCAGATTTTGCATTGGATATTCGCATGCCTGGGGTTACACCTAAACAG  
 TCCGATACATACTTCTGCATGTCTATGCGAATACCAGTGGATGAGGAAGCCTTCGTGATTGACTTCAAGC  
 CTCGAGCCAGCATGGATACTGTCCATCACATGTTACTTTTTGGATGCAATATGCCTTCATCCACTGGAAG  
 TTAGTGGTTTTGTGATGAAGGAACCTGTACAGATAAAGCCAATATTCTGTATGCCTGGGCGAGAAATGCT  
 CCCCTACCCGGCTCCCAAAGGTGTGGATTAGAGTTGGAGGAGAGACTGGAAGTAAATACTTTGTAC  
 TACAGGTACACTATGGGGATATTAGTGTCTTTAGAGATAATAACAAGGACTGTTCTGGTGTGCTTACA  
 CCTCACACGTCTGCCACAGCCTTAATTGCTGGCATGTACCTTATGATGTCTGTTGACACTGTTATCCCA  
 GCAGGAGAAAAAGTGGTGAATTCGACATTTTCATGCCATTATAAAAAATTATCCAATGCATGTCTTTGCC  
 ATAGAGTTCACACTCACCATTTAGGTAAGGTAGTAAGTGGATACAGAGTAAGAAATGGACAGTGGACACT  
 GATTGGACGGCAGAGCCCTCAGCTGCCACAGGCTTCTACCCTGTGGGGCATCCAGTTGATGTAAGTTTT  
 GGTGACCTACTGGCTGCAAGATGTGATTCACTGGTGAAGGAAGGACAGAAGCCACACACATTGGTGGCA  
 CGTCTAGTGATGAAATGTGCACTTATACATTATGATTACATGGAAGCCAAGCATGCAGTTTCTTTTCAT  
 GACCTGTACCCAGAATGTAGTCCAGATATGTTGAGAACCATACCACCAGAGGCCAACATCCAATTCCC  
 GTGAAGTCTGATATGTTTATGATGCATGAACATCATAAAGAAACAGAATATAAAGATAAGATTCCCTTAC  
 TACAGCAGCCAAAACGAGAAGAAGAAGTGTAGACCAGGGTATTCTATTACTACTTTTCCAAGT  
 GCTAGGAGAAAAGGGAAGATGTTGTTTCATGTGCACAAATAAATCCTACAGAAAAGGCAGAATCAGAGTCA  
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 CTTGAGGCCACCAGAGAGCAGAGTTTTCTCATTACAGCAGCCCCACCTGGTGAAGGCACCTGGGAACCA  
 GAACACACAGGAGATTTCCACATGGAAGAGGCACTGGATTGGCCTGGAGTATACTTGTACCAGGCCAGG  
 TTTCTGGGGTGGCTCTAGACCCTAAGAATAACCTGGTGTATTTCCACAGAGGTGACCATGTCTGGGATG  
 AAACCTGTTTACAGCAAGTTTGTACCAGCAAATAGGACTCGGACCAATTGAAGAAGACACTATTCTT  
 GTCATAGATCCAATAATGCTGCAGTACTCCAGTCCAGTGGAAAAATCTGTTTTACTTGCCACATGGCT  
 TGAGTATAGATAAAGATGGGAATTATTGGGTACAGACGTGGCTCTCCATCAGGTGTTCAAACCTGGATCC  
 AAACAATAAAGAAGGCCCTGTATTAATCCTGGGAAGGAGCATGCAACCAGGCAGTGACCAGAATCACTTC  
 TGTCAACCCACTGATGTGGCTGTGGATCCAGGCACTGGAGCCATTTATGTATCAGATGGTTACTGCAACA  
 GCAGGATTGTGCAGTTTTACCAAGTGGAAAGTTCATCACACAGTGGGGAGAAGAGTCTTCAGGGAGCAG  
 TCCTCTGCCAGGCCAGTTCAGTGTCTCACAGCTTGGCTCTTGTGCCTCTTTGGGCAATTATGTGTG  
 GCAGACCCGGAAAAATGGTCGGATCCAGTGTAAAACTGACACCAAAGAATTTGTGAGAGAGATTAAGC  
 ATTCATCATTTGGAAGAAATGATTTGCAATTCATATACCAGGCTTGCTCTTTGCAGTGAATGGGAA  
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 ATCTTCAAGCCAGTGCAGCAAGCACTTTGATATGCCTCATGATATTGTTGCATCTGAAGATGGGACTGTG  
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 TAAAAAGGCTGGCATTGAGGTCCAGGAAATCAAAGAAGCCGAGGCAGTGTGAAACCAAATGGAGAAC  
 AAACCCACCTCCTCAGAAATGCAGAAGATGCAAGAGAAACAGAACTGATCAAAGAGCCAGGCTCGGGAG  
 TGCCTGTTGTTCTCATTACAACCCTTCTGGTATTCCGGTGGTTGCTGCTGGCCATTGCCATATTTAT  
 TCGGTGGAAAAATCAAGGGCTTTGGAGCAGATTCTGAACACAACTCGAGACGAGTTCAGGAAGAGTA  
 CTGGGAAGATTTAGAGGAAAGGGAAGTGGAGGCTTAAACCTTGGTAATTTCTTTGCAAGCCGTAAGGGCT  
 ACAGTCGAAAAGGTTTACCAGGCTTAGCACTGAGGGCAGTGACCAAGAGAAAGAGGATGATGGAAGTGA  
 ATCAGAAGAGGAGTATTCAGCACCTCTGCCTGCGCTCGCACCTTCTCTCTCC

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

**Protein Sequence:** >RG212581 representing NM\_000919  
 Red=Cloning site Green=Tags(s)

MAGRVPSLLVLLVFPSSCLAFRSPLSVFKRFKETTRPFSNECLGTTTRPVVPIDSSDFALDIRMPGVTPKQ  
 SDTYFCMSMRIPVDEEAFVIDFKPRASMDTVHHMLLFGCNMPSSTGSYWFCEGTCTDKANILYAWARNA  
 PPTRLPGKGVFRVGGETGSKYFVLQVHYGDISAFRDNNKDCSGVSLHLTRLPQPLIAGMYLMMSVDVIP  
 AGEKVVNSDISCHYKNYPMHVFAIRVHTHHLGKVVSGYVRNGQWTLIGRQSPQLPQAFYPVGHVVDVSF  
 GDLLAARCVFTGEGRTEATHIGGTSSDEMCLYIMYYMEAKHAVSFMTCTQNVAPDMFRTIPPEANIPIP  
 YKSDMVMMEHHKETEYKDKIPLLQQPKREEEVLDQGDYFSLLSKLLGEREDVVHVHKYNPTEKAESES  
 DLVAEIANVVQKDLGRSDAREGAEHERGNAILVRDRIHKFHRLVSTLRPPESRVFSLQQPPGEGTWP  
 EHTGDFHMEALDWPVYLLPGQVSGVALDPKNNLVIFHRGDHVWDGNSFDSKFVYQQIGLPIEEDTIL  
 VIDPNNAVLQSSGKNLFYLPGLSIDKDGNYWVDVALHQVFKLDPNNKEGPVILGRSMQPGSDQNH  
 CQPTDVAVDPGTGAIYVSDGYCNSRIVQFSPSGKFITQWGEESGSSPLPGQFTVPHSLALVPLLGQLCV  
 ADRENGRIQCFTDTKEFVREIKHSSFGRNVFAISYIPGLLFAVNGKPHFGDQEPVQGFVMNFNGEIID  
 IFKPVRKHFDMPHDIVASEDGTYYIGDAHTNTVWKFTLTKLEHRSVKKAGIEVQEIKEAEAVVETKME  
 N KPTSSSELQKMQEKQLIKEPGSGVPVLLITLLVIPVVLLAIAIFIRWKKSRAGADSEHKLETSSGRV  
 LGRFRGKGSGLNLGNFFASRKGYSRKGFDRLESTEGSDQEKEDDGSEEEYSAPLPALAPSS

TRTRPLE – GFP Tag – V

**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_000919

**ORF Size:** 2922 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](#)

**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\\_000919.3](#)

**RefSeq Size:** 3960 bp

**RefSeq ORF:** 2925 bp

**Locus ID:** 5066

**UniProt ID:** [P19021](#)

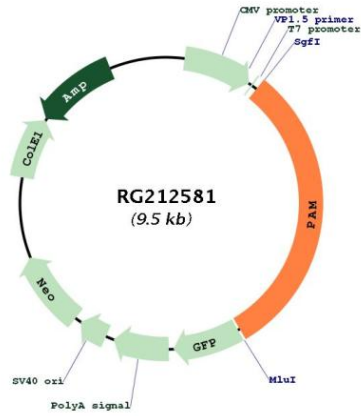
**Cytogenetics:** 5q21.1

**Domains:** Cu2\_monoox\_C, NHL

**Protein Families:** Druggable Genome, Transmembrane

**Gene Summary:** This gene encodes a multifunctional protein. The encoded preproprotein is proteolytically processed to generate the mature enzyme. This enzyme includes two domains with distinct catalytic activities, a peptidylglycine alpha-hydroxylating monooxygenase (PHM) domain and a peptidyl-alpha-hydroxyglycine alpha-amidating lyase (PAL) domain. These catalytic domains work sequentially to catalyze the conversion of neuroendocrine peptides to active alpha-amidated products. Alternative splicing results in multiple transcript variants, at least one of which encodes an isoform that is proteolytically processed. [provided by RefSeq, Jan 2016]

Product images:



Circular map for RG212581