

## Product datasheet for **MG216758**

### **Padi4 (NM\_011061) Mouse Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Padi4 (NM_011061) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Padi4
Synonyms:	Pad4; Pdi4
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>MG216758 representing NM\_011061  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGGCCAAAGCGCGGTGATCCACGTGGCCCCGAGCAGCCACTCACGCCGTGTGTGGTGGGCACAG  
 CGACCCCGCTGGATGTCCGCGGTTCTGCTCCTAAGGGCTACACAACCTTCGGCATCACAGCCTCTCCAGG  
 AGTCATCGTAGATGTCATCCATGGTCTCCAGTCAAGAAGAGTACCATGGGGGCCTCCAAATGGCCTCTG  
 GACCCCTGAGCTGGAGGTGACCCTACAGGTGAAAGCAGCCAGCAGCAGAACAGATGATGAAAAGGTTGAG  
 TTTCACTATGGACCAAGACCTCCCCAGTCCAAGCCCTGATCTACATCACTGGGGTGGAACTGTCCCT  
 GAGCGCAGATGTACCCGCACAGGCAGAGTGAAGCCAGCCCAAGCCGGGAAGGATCAGAGCACCTGGACC  
 TGGGGCCCGGGCGCCGTGGCGCCATCCTGTTGGTGAAGTGTGACAAAGAGGACCCTCAGGCCTCCGGAA  
 TGGACTTTGAGGATGACAAGATCTTGGACAACAAAGACCTGCAGGACATGTCTCCAATGACCCTAAGCAC  
 GAAGACGCCCAAAGACTTCTTTGAAAAGTATCAGCTGGTGTGGAGGTGCCCAAGCCAAGATGAACAGA  
 GTGAGAGTCTTCCGGGCCACACGGGGCAAACCTGCCGTCCCGGTACAAGGTGGCCCTGGGACCACAACAGT  
 TCTCGTATTGCCTGGAGCTGCCCGGGCCAGCACAGCAGACTTCTATGTGGAAGGCCTTGCTTTCCC  
 AGACGCAGACTTCAAAGGGCTCATTCCCCTCACCATCTCCCTGCTGGACAAGTCTAACCCGGAGCTCCCC  
 GAGGCCCTGGTGTCCAAGACAGTGTGACGTTCCGTGTGGCCCCCTGGATCATGACCCCCAACACTCAGC  
 CCCCCAGGAGGTGTACGTGTGCAGGTTTCTGACAATGAAGACTTCTAAAGTCACTAGCTACTCTGAC  
 CAAGAAAGCCAAGTGAAGCTGACTGTGTGCCCGAGGAGGAGAATATAGATGACCAATGGATGCAGGAC  
 GAAATGGAGATTGGCTACATCCAGGCCACACAAGACGCTGCCTGTGGTCTTTGACTCCCCGAGGGACA  
 GAGGCCTGAAGGATTTCCCTGTCAAGCGAGTTATGGGTCCAAATTTTGGCTATGTGACCCGAAAGCTCTA  
 TATGTGAGAGCTCACTGGGCTGGATGCCTTTGGGAACCTGGAGGTGAGTCCCCCAGTCACTGTGAGAGGG  
 AAGGAGTACCCACTGGGCAGAATTCTCATCGGGAATAGCGGTTACTCCAGCAGCGAGAGCCGGGACATGC  
 ACCAGGCCCTGCAGGACTTCTGAGCGCCAGCAGGTGCAGGCCCCCGTGGAGCTTCTCCGATTGGCT  
 CTTTGTGGGTACGTGGATGAGTCTTGTAGCTTTGTCCAGCGCGGGACAAGCAGGGTTTTCCGGTGTCTG  
 CTGTCCAGCCCCAGAGCTTGCTATCAGCTGTTCCAGGAGCTACAGAGCCAGGGCCACGGGGAGGCGACAC  
 TGTTGGAAGGACTCAAGAGGAAAAGGCAGACAATCAATGAAATTTCTGTCCAACAAGAAATTAAGAGACCA  
 GAATGCCTATGTGGAGAGCTGTATCGACTGGAACCGGGCGGTGCTGAAGCGGGAGCTGGCCTGGCAGAG  
 GGTGACATCATCGACATTCGCAGCTCTTCAAGCTCGCGGGAACCTCCAGAGGAACTCTAAGGCCCAGG  
 CCTTCTTCCCAAACATGGTGAACATGCTGGTCTGGGCAAGTACCTGGGCATCCCCAAGCCCTTTGGGCC  
 CATCATCGATGGCCACTGCTGCCTGGAGGAGGAGTGCCTTCCACCTGGAGCCGCTGGGTCTGCACTGC  
 ACCTTCATCAACGACTTCTACACCTACCAGGTGTACAACGGGGAGGTTCACTGTGGCACCAATGTGCGCA  
 GGAAGCCCTTACCTTCAAGTGGTGGCACATGGTGCC

**ACGCGT**ACGCGGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:** >MG216758 representing NM\_011061  
 Red=Cloning site Green=Tags(s)

MAQGAVIHVAPEQPTHAVCVVGTATPLDVRGSAPKGYTTFGITASPGVIVDVIHGPPVKKSTMGASKWPL  
 DPELEVTLQVKAASSRTDDEKVRVSYGPKTSPVQALIYITGVELSLADVTRTRGRVKPAQAGKDQSTWT  
 WGPGGRGAILLVNCDKEDPQASGMDFEDDKILDNKNLQDMSPMTLSTKTPKDFFEKYQLVLEVPKAKMNR  
 VRVFRATRGLPSRYKVALGPQQFSYCLELPGGQHSTDFYVEGLAFPDADFKGLIPLTISLLDKSNPELP  
 EALVFQDSVTFRVAPWIMTPNTQPPQEVYVCRVSDNEFLKSLATLTKKAKCKLTVCPEEENIDDQWMQD  
 EMEIGYIQAPHKTLPVVFDSPDRGLKDFPVKRVMGPNFGYVTRKLYMSELTGLDAFGNLEVSPVTVRG  
 KEYPLGRILIGNSGYSSSESMDMHQALQDFLSAQVQAPVRLFSDWLVFGHVDFELSFVPARDKQGFRL  
 LSSPRACYQLFQELQSQGHGEATLFEGLKRKRQTINEILSNKKLRDQNAVYVESCIDWNRAVLKRELGLAE  
 GDIIIDIPQLFKLAGNSRGNKAQAFPMVMNMLVLGKYLGIKPKFGPIIDGHCCLEEEVRSHPLEPLGLHC  
 TFINDFYTYHVYNGEVHCGTNRVRKPFTEKWHMVP

TRTRPLE - GFP Tag - V

**Restriction Sites:**

Sgfl-MluI

**Cloning Scheme:**



**ACCN:** NM\_011061

**ORF Size:** 1998 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\\_011061.2](#), [NP\\_035191.2](#)

**RefSeq Size:** 2640 bp

**RefSeq ORF:** 2001 bp

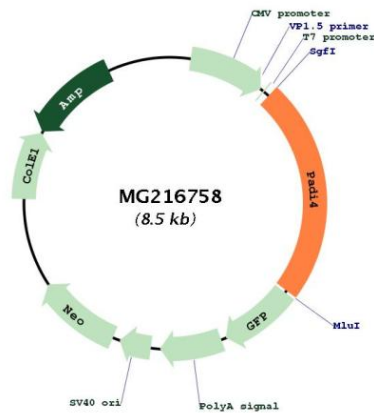
**Locus ID:** 18602

**UniProt ID:** [Q9Z183](#)

**Cytogenetics:** 4 72.34 cM

**Gene Summary:**

Catalyzes the citrullination/deimination of arginine residues of proteins such as histones, thereby playing a key role in histone code and regulation of stem cell maintenance. Citrullinates histone H1 at 'Arg-54' (to form H1R54ci), histone H3 at 'Arg-2', 'Arg-8', 'Arg-17' and/or 'Arg-26' (to form H3R2ci, H3R8ci, H3R17ci, H3R26ci, respectively) and histone H4 at 'Arg-3' (to form H4R3ci). Acts as a key regulator of stem cell maintenance by mediating citrullination of histone H1: citrullination of 'Arg-54' of histone H1 (H1R54ci) results in H1 displacement from chromatin and global chromatin decondensation, thereby promoting pluripotency and stem cell maintenance. Promotes profound chromatin decondensation during the innate immune response to infection in neutrophils by mediating formation of H1R54ci. Citrullination of histone H3 prevents their methylation by CARM1 and HRMT1L2/PRMT1 and represses transcription. Citrullinates EP300/P300 at 'Arg-2142', which favors its interaction with NCOA2/GRIP1.[UniProtKB/Swiss-Prot Function]

**Product images:**

Circular map for MG216758