OriGene Technologies, Inc.
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
https://www.origene.com
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

Product datasheet for MG224274

Phf8 (NM_001113354) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Phf8 (NM_001113354) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Phf8
Synonyms:	9830141C09Rik; mKIAA1111
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)

ORF Nucleotide Sequence:

>MG224274 representing NM_001113354
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGCCTCGGTGCCTGTGTATTGCCTCTGTCGACTGCCTTATGATGTGACCCGCTTCATGATCGAGTGTG
ACATGTGCCAGGACTGGTTTCACGGCAGTTGTGTTGGTGTTGAGGAGGAGAAGGCTGCTGATATTGATCT
TTACCACTGCCCTAACTGTGAGGTCTTACATGGACCTTCCATTATGAAAAAACGTCGTGGATCTTCCAAA
GGACATGATAATCACAAGGGGAAGCCACTGAAGACTGGAAGCTCTATGTTTATCCGAGAACTTCGGGGCA
GAACTTTTGACAGCTCAGATGAAGTGATTCTGAAGCCCACTGGAAGTCAGCTGACTGTGGAATTCTTGGA
AGAGAATAGCTTCAGCGTGCCTATCCTTGTCTTGAAGAAGGATGGGTTGGGGATGACATTACCCTCTCCA
TCATTCACTGTGAGGGATGTGGAACACTATGTTGGTTCTGACAAAGAGATTGATGTGATTGATGTGGCCC
GCCAGGCTGACTGCAAGATGAAACTCGGTGATTTTGTCAAATACTATTACAGTGGGAAGAGGGAAAAAGT
CCTCAATGTCATTAGTTTGGAATTCTCCGATACCAGGCTTTCAAACCTCGTGGAAACACCCAGGATTGTT
CGCAAGCTGTCATGGGTGGAGAACTTGTGGCCAGAGGAATGTGTCTTTGAGAGACCCAATGTGCAGAAGT
ACTGCCTCATGAGTGTGCGGGATAGCTATACAGATTTTCACATTGACTTTGGTGGGACCTCAGTTTGGTA
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TGCTGGAGTAGCTCCTCCAATCAGAACGAGATGTTCTTTGGTGACCAAGTGGAAAAGTGCTACAAGTGTT
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CTTAACCAAGCCAGCCCATTCCACTTCAGTATCCATGTCCAAGCTGTCACTGCCCTCCAAAAATGGTTCA

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AAGAAGAAAGGCCTGAAGCCCAAGGATATCTTCAAGAAGGCAGAGCGAAAGGGCAAGCAGAGTTCAGCCT
TGGGGCCTGCTGGCCAGTTGAGCTATAATCTCATGGACCCATACAGTCATCAGGCACTGAAGACAGGCCC
TTCCCAGAAAGCAAAGTTCAACATGAGTGGTACCAGCTTGAATGATTCAGATGATGACTCAGCAGACATG
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GAGTTGCCTCCATTGAGACAGGCTTGGCTGCAGCAGCTGCAAAGCTTGCCCAGCAGGAGCTACAAAAGGC
CCAAAAGAAGAAATATATCAAGAAGAAGCCTTTGCTGAAGGAGGTAGAACAGCCGCGCCCTCAAGATTCC
AATCCCATCATGACAATGCCTGCACCAACTGTGGCTACAACACCCCAGCCTGACACCTCCTCCTCACCCC
AGCCACCTCCTGAGCCTAAACAAGAGGCTCTGTCAGGAAGTCTTGCTGACCATGAGTACACTGCTCGTCC
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CGGCGCCCTTCAGTTGGTTCCCAGAGCAGTCAGGCAGGACAAGGAAAGCGTCCTAAAAAGGGCCTGGCCA
CAGCAAAGCAGAGACTCGGCCGCATCCTGAAAATCCACAGAAATGGCAAGTTACTTCTG

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>MG224274 representing NM_001113354
Red=Cloning site Green=Tags(s)

MASVPVYCLCRLPYDVTRFMIECDMCQDWFHGSCVGVEEEKAADIDLYHCPNCEVLHGPSIMKKRRGSSK
GHDNHKGKPLKTGSSMFIRELRGRTFDSSDEVILKPTGSQLTVEFLEENSFSVPILVLKKDGLGMTLPSP
SFTVRDVEHYVGSDKEIDVIDVARQADCKMKLGDFVKYYYSGKREKVLNVISLEFSDTRLSNLVETPRIV
RKLSWVENLWPEECVFERPNVQKYCLMSVRDSYTDFHIDFGGTSVWYHVLKGEKIFYLIRPTNANLTLFE
CWSSSSNQNEMFFGDQVEKCYKCSVKQGQTLFIPTGWIHAVLTPVDCLAFGGNFLHSLNIEMQLKAYEIE
KRLSTADLFKFPNFETICWYVGKHILDIFRGLRENRRHPASYLVHGGKALNLAFRAWTKKEALPDHEDEI
PETVRTVQLIKDLAREIRLVEDIFQQNVGKTSNIFGLQRIFPAGSIPLTKPAHSTSVSMSKLSLPSKNGS
KKKGLKPKDIFKKAERKGKQSSALGPAGQLSYNLMDPYSHQALKTGPSQKAKFNMSGTSLNDSDDDSADM
DLDGSENPLALLMANGSTKRMKSVSKSRRAKIAKKVDSARLVAEQVMGDEFDLDSDDELQIDERLGKEKA
NLLIRSKFPRKLPRAKPCSDPNRIREPGEVEFDIEEDYTTDEDMVEGVESKLGNGSGAGGILDLLKASRQ
VGGPDYAALTEAPASPSTQEAIQGMLCMANLQSSSSSPATSSLQAWWTGGQERSSGSSSSGLGTVSSSPA
SQRTPGKRPIKRPAYWKNESEEEENASLDEQDSLGACFKDAEYIYPSLESDDDDPALKSRPKKKKNSDDA
PWSPKARVTPTLPKQDRPVREGTRVASIETGLAAAAAKLAQQELQKAQKKKYIKKKPLLKEVEQPRPQDS
NPIMTMPAPTVATTPQPDTSSSPQPPPEPKQEALSGSLADHEYTARPNAFGMAQANRSTTPMAPGVFLTQ
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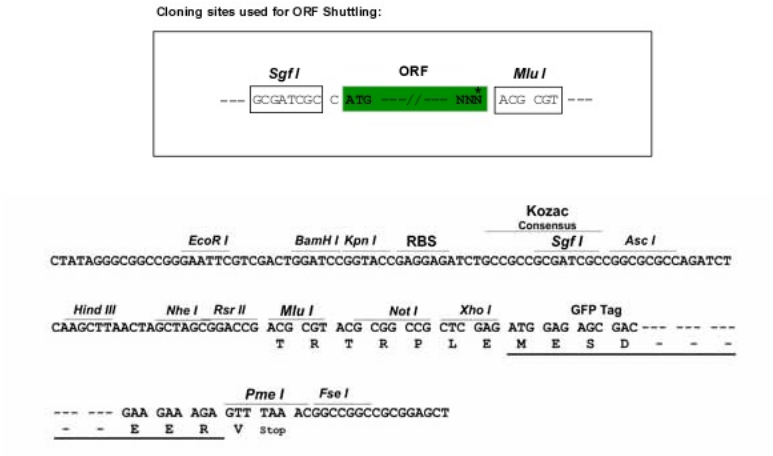
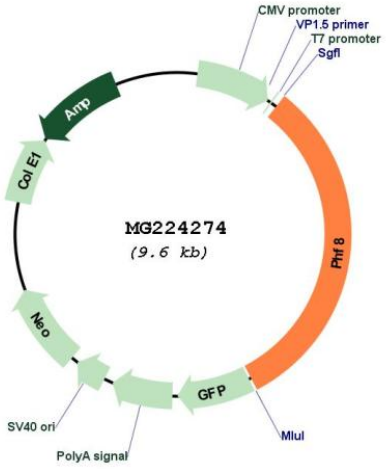
TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM_001113354

ORF Size: 3069 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_001113354.1, NP_001106825.1
RefSeq Size:	6359 bp
RefSeq ORF:	3072 bp
Locus ID:	320595
UniProt ID:	Q80TJ7
Cytogenetics:	X F3

Gene Summary: Histone lysine demethylase with selectivity for the di- and monomethyl states that plays a key role cell cycle progression, rDNA transcription and brain development. Demethylates mono- and dimethylated histone H3 'Lys-9' residue (H3K9Me1 and H3K9Me2), dimethylated H3 'Lys-27' (H3K27Me2) and monomethylated histone H4 'Lys-20' residue (H4K20Me1). Acts as a transcription activator as H3K9Me1, H3K9Me2, H3K27Me2 and H4K20Me1 are epigenetic repressive marks. Involved in cell cycle progression by being required to control G1-S transition. Acts as a coactivator of rDNA transcription, by activating polymerase I (pol I) mediated transcription of rRNA genes. Required for brain development, probably by regulating expression of neuron-specific genes. Has activity toward H4K20Me1 only when nucleosome is used as a substrate and when not histone octamer is used as substrate. May also have weak activity toward dimethylated H3 'Lys-36' (H3K36Me2), however, the relevance of this result remains unsure in vivo. Specifically binds trimethylated 'Lys-4' of histone H3 (H3K4me3), affecting histone demethylase specificity: has weak activity toward H3K9Me2 in absence of H3K4me3, while it has high activity toward H3K9me2 when binding H3K4me3. [UniProtKB/Swiss-Prot Function]