

Product datasheet for **MG214730**

4921501E09Rik (NM_001009544) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Tag:	TurboGFP
Symbol:	4921501E09Rik
Synonyms:	PHF8
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence: >MG214730 representing NM_001009544
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGCCTTGGTGCCTGTGATTGTCTTTGTGACAGCCTTATAATGTGAACCACTTCATGATTGAGTGCC
GCCTGTGCCAGGACTGGTTTCATGGTAGCTGTGTTGGGATTGAAGAAGAAAACGCTGTTGACATTGACAT
CTACCACTGCCAGACTGTGAGGCTGTATTTGGACCTCCATTATGAAAACTGGCATGGATCACCTAGA
GTGCATGATGCTCTCAAGAGGAAGCCATTGACTGGGAGCCCTACCTCTATTCACCAAATCCAGGGTA
GGATTTTTGAAAGCTCTGACAAAGTGATTTTGAAGCCACAGGAAGTCATTTAACAGTAGAATTTCTGCT
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GTCAGGCTAGCAGCAAGATGATGTTGGGAGATTTGTGAAATATTATTACAGCAGGAAGAGGGAAAAAGAC
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CGTAAGCTTTCCTGGGTTGAAAACCTATGCCCAGAAAGATTGCGGCTTTGAGAGACCCAATGTACAGAAGT
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AGCAGGACCATCTGTGCTGAGGGTAAACAGAGTTGGCTCCATTGAGATAGACTGGACTACAGCAGCTAC
AAAGCTGGCACAGGAGGTGAACAACATGAAGCTCACTCTCACTAGTCCAGGAAAAAGCAGCCAA

ACCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>MG214730 representing NM_001009544
Red=Cloning site Green=Tags(s)

MALVPVYCLCRQPVNVNHFMIIECGLCQDWFHGSCVGIIEENAVDIDIYHCPDCEAVFGPSIMKNWHGSPR
VHDALKRKPLMTGSPTSIIHQIQGRIFESSDKVILKPTGSHLTVEFLLESSFSIPILVLKKGDLGMLPPT
SFTVRDVEQYVGSVDREVDVIDVACQASSKMLGDFVKYYSRKREKTFNVINLEFSNTGLSNIVEMPKIV
RKL SWVENLWPEDCGFERPNVQKYCLMSMQNSYDFHIEFGGTSAWYHVVKGEKIFYLIRPTDANLTLFE
CWSNNSNQKEIFFGDQVDRCYKCSVKQGQTLFIPTGWIYAVLTPVDCLAFGGNFLHSLNIEMQLKVYEIE
KHLCTTDLFKFSPFETICWHVKGHILDIFKGLRENGRCPASFLVHGGKALNLAFAQWTRKEVLPDHDNEI
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KKS PKYKDTFKKEEQMSKESALGPNYQHSCNFMDLNNDQQWKVGCLQNVFNITSTCLNDSDDNSKHDK
AFNGNESLVPLLMANGNTKREKSLSESWQAKITKKEDTSRLMKEQAMVDTFDLNDELQIEKGLGKEKV
SLVVRPKIPPSPHVKLCSDQNQSHDPGETEITIVENYKIDKEMVEGVEGKFKNGSESGGTIDPLKTKKQ
VGGPGCVILTDDPNSSSNKKDIQDTVCMSDLQSSPPSQAPSSLQAFWSGGDQGNKSPSSVLGTVSDSPV
SRRTPRKWP IKRLAYWRNESEAGNACVDEQGLGACFKYIFLSLESDDDDDDDDDDDDNNPALRVL
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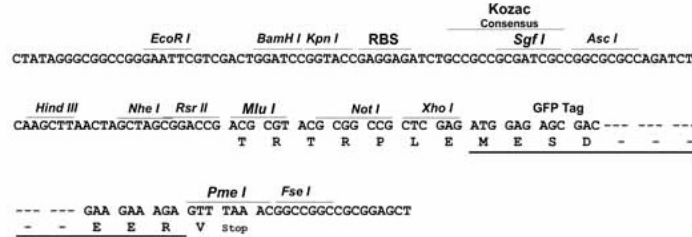
TRTRPLE - GFP Tag - V

Restriction Sites:

Sgfl-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



ACCN: NM_001009544

ORF Size: 2724 bp

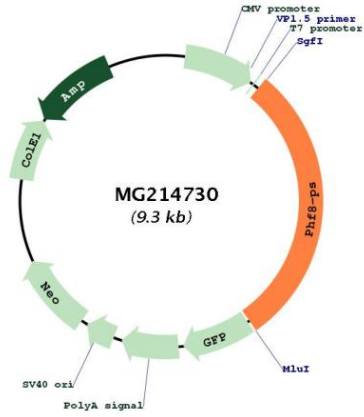
OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially 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:	<ol style="list-style-type: none">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.
Note:	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
RefSeq:	NM_001009544.2 , NP_001009544.1
RefSeq Size:	3916 bp
RefSeq ORF:	2727 bp
Locus ID:	74042
UniProt ID:	Q80TJ7
Cytogenetics:	17 B1
Gene Summary:	<p>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]</p>

Product images:



Circular map for MG214730