

Product datasheet for **MG208572**

Paf1 (NM_019458) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Paf1 (NM_019458) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Paf1
Synonyms:	5730511K23Rik; AA675045
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>MG208572 representing NM_019458
 Red=Cloning site Blue=ORF Green=Tags(s)
 TTTTGAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGGCGCCACCATCCAGACCCAGGCCAGAGGGAAGATGGCCACAGGCCCAATCCACCGGACCTTGC
 CTGAGAGGTCTGGAGTAGTCTGCCGAGTCAAGTACTGCAATAGCCTTCTGACATCCCATTGACCCCAA
 GTTCATCACCTACCCCTTCGACCAGAACAGTTTGTTCAGTACAAAGCAACCTCCTTGAGAAAACAGCAC
 AAACATGACCTCCTGACTGAGCCAGATCTGGGGTACCATTGATCTCATCAACCCTGACACCTACCGCA
 TTGATCCCAATGTTCTTCTGGATCCGGCTGATGAGAAGCTTCTAGAAGAGGAGATTCAGGCTCCCACCAG
 CTCTAAGAGATCCAGCAGCATGCAAAGGTGGTACCGTGGATGCGTAAGACAGAGTATATCTCCACTGAG
 TTCAACAGATATGGCATCTCCAATGAGAAGCCTGAAGTCAAGATTGGGGTTTCTGTGAAACAGCAGTTCA
 CAGAGGAAGAAATACAAAGACAGGGACAGCCAAATCACAGCCATTGAAAAGACTTTTGAAGATGCCCA
 GAAATCGATCTCCAGCATTACAGCAAGCCCGAGTGACACCAGTGGAGGTCATGCCTGTCTTCCAGAT
 TTTAAGATGTGGATAAACCCATGTGCTCAGGTCATTTTGACTCAGACCCAGCCCAAGGACACAAGTG
 GTGCAGCTGCATTAGAGATGATGTCTCAGGCCATGATCAGGGCATGATGGATGAGGAAGGGAACCAAGT
 TGTGGCTATTTTCTGCCTGTGGAAGAAACACTAAAGAAACGAAAGCGGGACCAAGAGGAAGAGATGGAC
 TATGCACCAGATGATGTGTATGACTATAAGATTGCTCGGGAATACAACCTGGAATGTGAAGAAACAGGCCA
 GTAAGGGCTATGAGGAGAACTATTTCTTCATCTTCAGAGAGGGTACGGAGTTTACTACAATGAGCTGGA
 GACCAGGTCCGTCTAAGTAAGCGCCGGGCAAGGCTGGGGTTCAGTCAGGTACCAATGCCTTGTCTGTC
 GTCAAACACCGTGACATGAATGAGAAGGAATTAGAAGCCAGGAGGCACGAAAGGCCAGTTGGAAAACC
 ACGAACCAGAGGAAGAGGAGGAGGAAGAGATGGAGGCTGAAGAGAAAGAAGCTGGGGCTCAGATGAGGA
 ACAGGAGAAGGGTAGCAGCAGTGAGAAAGAAGGCAGCGAGGATGAACACTCTGGAAGTGAGAGTGACCGA
 GAAGAGGGTGACAGAGATGAGGCAAGTGACAAGAGTGGCAGCGGTGAGGATGAAAGCAGCGAGGATGAAG
 CACGTGCTGCCCGGACAAAGAGGAGATTTTGGTAGTGATGCTGATTGAGAAGATGATGCTGACTCTGA
 TGATGAGGACAGAGGGCAGGCCACAGGGCAGTGACAATGACTCGGACAGTGGCAGTGGTGGTGGC
 CAGAGGAGCCGCAGCCAGAGCAGGAGTCGTAGCCGGAGTGCCAGCCCTTCCCAAGTGGCAGTGGAGT
 CAGCTCAGGAAGATGGCAGTGAAGCAGCAGCCTCTGATCCAGTGAAGGCTGACAGTGAAGTGAAT

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>MG208572 representing NM_019458
 Red=Cloning site Green=Tags(s)
 MAPTIQTQAQREDGHRPNSHRTLPERSGVVCVRVKYCNLSLPDIPFDPKFITYPFDQNRVQYKATSLEKQH
 KHDLLTEPDLGVTIDLINPDTYRIDPNVLLDPADEKLLLEEEIQAPTSSKRSQQHAKVVPWVRKTEYISTE
 FNRYGISNEKPEVKIGVSVKQFTEEEIYKDRDSQITAEKTFEDAQKSIHQHYSKPRVTPVEVMPVFPD
 FKMWINPCAQVIFDSDPAKDTSGAAALEMMSQAMIRGMMDEEGNQFVAYFLPVEETLKKRKRQDEEEMD
 YAPDDVYDYKIAREYNWNVKNKASKGYEENYFFIFREGDGVYNELETRVRLSKRRKAGVQSGTNALLV
 VKHRDMNEKELEAQEARKAQLLENHEPEEEEEEMEAEKEAGGSDEEQEKSSSEKEGSEDEHSGSESDR
 EEGDRDEASDKSGSEDESEDEARAARDKEEIFGSDADSEDDADSDEDRGQAHRGSDNDSGSDGGG
 QRSRSQRSRSASPFPSGSEHAQEDGSEAAASDSSEADSDSD

TRTRPLE - GFP Tag - V

Restriction Sites:

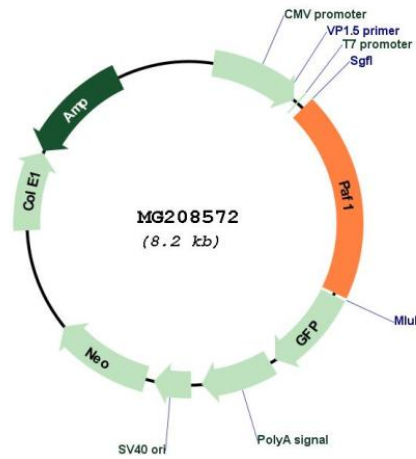
Sgfl-Mlul

Cloning Scheme:

Cloning sites used for ORF Shutting:



Plasmid Map:



ACCN:	NM_019458
ORF Size:	1605 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.
RefSeq:	NM_019458.2
RefSeq Size:	1953 bp
RefSeq ORF:	1608 bp
Locus ID:	54624
UniProt ID:	Q8K2T8
Cytogenetics:	7 B1

Gene Summary:

Component of the PAF1 complex (PAF1C) which has multiple functions during transcription by RNA polymerase II and is implicated in regulation of development and maintenance of embryonic stem cell pluripotency. PAF1C associates with RNA polymerase II through interaction with POLR2A CTD non-phosphorylated and 'Ser-2'- and 'Ser-5'-phosphorylated forms and is involved in transcriptional elongation, acting both independently and synergistically with TCEA1 and in cooperation with the DSIF complex and HTATSF1. PAF1C is required for transcription of Hox and Wnt target genes. PAF1C is involved in hematopoiesis and stimulates transcriptional activity of KMT2A/MLL1. PAF1C is involved in histone modifications such as ubiquitination of histone H2B and methylation on histone H3 'Lys-4' (H3K4me3). PAF1C recruits the RNF20/40 E3 ubiquitin-protein ligase complex and the E2 enzyme UBE2A or UBE2B to chromatin which mediate monoubiquitination of 'Lys-120' of histone H2B (H2BK120ub1); UB2A/B-mediated H2B ubiquitination is proposed to be coupled to transcription. PAF1C is involved in mRNA 3' end formation probably through association with cleavage and poly(A) factors. Connects PAF1C with the RNF20/40 E3 ubiquitin-protein ligase complex. Involved in polyadenylation of mRNA precursors (By similarity). [UniProtKB/Swiss-Prot Function]