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 MG211277

Pkn1 (NM_177262) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Pkn1 (NM_177262) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Pkn1
Synonyms:	DBK; F730027O18Rik; PAK1; Pkn; PRK1; Prkcl1; Stk3
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)

View online »

ORF Nucleotide Sequence:

>MG211277 representing NM_177262
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGCCGGCGACGCCGTACAGAGTGAGCCTCGAAGCTGGTCGCTGCTGGAACAGCTGGGTCTGGCTGGGG
CTGACCTGGCAGCCCCCGGGGTGCAGCAACAGCTGGAGTTAGAGCGAGAGCGACTGAAGCGGGAGATACG
GAAGGAGCTGAAGCTGAAGGAGGGCGCTGAGAACCTGAGGCGAGCCACCACTGACCTGGGCCGTAGCCTG
GCCCCTGTGGAGCTGCTGCTGCGGGGCTCCGCTCGACGCCTAGACTTACTGCACCAGCAGCTGCAGGAGC
TGCATGCACATGTGGTGCTGCCTGACCCTGCAGCTGGAAGCGATGCTACCCAATCCCTTGCAGAGGGCAG
CCCTATCTGCTCATCCACCAACCTGAGCAGAGTGGCTGGGCTGGAGAAGCAGCTGGCCATTGAGCTCAAG
GTCAAACAGGGGGCAGAGAACATGATCCAGACCTATAGCAATGGCAGCAGCAAGGACCGGAAGCTGTTGT
TGACAGCCCAGCAGATGCTGCAGGACAGTAAGACCAAGATTGACATCATCCGCATGCAGCTTCGAAGAGC
GCTCCAGGCACTACAGGCTGGAGAGCTGGAGAGTCAGGCAGCTCCTGATGAAGCCCAAGGAGATCCAGAA
CTGGGAGCCGTAGAGCTACGCATTGAGGAGCTACGACACCATTTTCGAGTGGAGCATGCAGTGGCAGAAG
GTGCCAAGAATGTCCTGCGCCTGCTCAGTGGGGCAAAGGCCCCAGACCGCAAGGCAGTCAGCGAGGCTCA
GGAGAAATTGACTGAGTCCAACCAGAAGCTGGGCTTGCTGCGGGAATCACTGGAGAGGCGCCTTGGGGAG
TTGCCTGCCGATCACCCCAAGGGGCGGCTGCTTCGGGAGGAGCTCACTGCAGCCTCGTCCTCAGCCTTCA
GCGCCATACTGCCTGGGCCCTTCCCTGCCACTCACTACAGCACCTTGAGCAAGCCTGCACCGCTCACAGG
GACCCTGGAAGTACGAGTGGTGGGCTGCAAAAACCTTCCCGAGACCATCCCCTGGAGCCCTCCCCCCTCA
GTGGGGGCATCTGGGACCCCCGAAAGCCGCACTCCGTTCCTGAGTCGCCCCGCTCGGGGCCTTTACAGCC
GGAGTGGAAGCCTTAGTGGACGGAGCAGCCTCAGAGGGGAGGCAGAGAATGCCACTGAGGTCAGCACCGT
GCTCAAGCTGGACAACACAGTGGTGGGGCAAACAGCCTGGAAGCCATGCGGCCCCAATGCCTGGGACCAG
AGCTTTACCCTGGAGCTGGAGAGGGCTCGGGAGCTGGAGCTGGCTGTGTTCTGGCGAGACCAGAGGGGTC
TGTGTGCTCTCAAATTTCTGAAGTTGGAGGACTTCTTGGACAACGAGAGGCATGAGGTGCAGCTGGACAT
GGAACCCCAGGGCTGCCTGGTGGCTGAGGTCACTTTCCGAAACCCCATCATCGAGCGGATCCCTAGGCTC
CAAAGGCAGAAAAAAATCTTCTCCAAGCAGCAAGGGAAGGCATTTCAGCGAGCCAGACAGATGAACATAG
ATGTGGCGACTTGGGTGCGGCTGCTCCGTAGACTCATCCCTAGTGCTGTGGCCACTGGCACCTTCAGTCC
CAATGCATCTCCAGGTGCTGAGATCCGGCACACTGGAGACATATCCATGGAGAAATTGAATCTCGGTGCT
GACTCAGACAGCTCGTCCCAAAAGAGCCCACCAGGGCTGCCCTCCACCTCATGCAGCCTGAGTTCTCCAA
CCCATGAATCCACCACATCTCCAGAGCTGCCTTCAGAGACCCAGGAGACTCCAGGCCCTGGCCTGTGCAG
CCCCTTGAGAAAGTCGCCCCTGACACTTGAGGACTTCAAGTTCCTGGCCGTGCTTGGCCGGGGTCACTTT
GGAAAGGTGCTGCTGTCTGAATTCCGCTCCAGTGGGGAGCTCTTTGCCATCAAAGCCTTGAAGAAAGGTG
ACATTGTAGCCCGAGATGAGGTTGAGAGCCTGATGTGTGAGAAGCGGATTTTGGCGGCCGTGACCAGGGC
AGGACATCCCTTCCTGGTGAACCTTTTCGGCTGTTTCCAGACCCCAGAGCACGTGTGCTTTGTGATGGAG
TACTCGGCGGGTGGAGACCTGATGCTGCACATTCATAGCGACGTGTTCTCAGAGCCTCGGGCTGTCTTCT
ATTCGGCCTGTGTGGTGCTGGGACTGCAGTTCCTCCATGAACACAAGATTGTCTACAGGGACCTGAAGTT
GGACAATTTGCTCCTGGATACTGAGGGCTACGTCAAGATCGCAGACTTTGGCCTCTGCAAGGAGGGGATG
GGCTATGGGGACCGGACCAGCACGTTCTGCGGAACTCCGGAGTTCCTGGCGCCGGAAGTGCTCACAGACA
CATCCTACACGCGAGCAGTGGACTGGTGGGGACTGGGCGTGCTGCTCTATGAGATGTTGGTTGGAGAGTC
TCCGTTCCCTGGGGATGATGAGGAGGAGGTATTTGACAGCATTGTCAACGACGAAGTTCGCTATCCCCGC
TTCCTGTCTGCAGAGGCCATCGGCATCATGAGAAGGCTACTGCGGAGGAACCCGGAGCGGAGGCTGGGGT
CCACTGAGCGCGATGCAGAAGATGTGAAAAAACAGCCTTTCTTCCGGTCTCTGGGCTGGGATGTCCTGCT
GGCCCGCCGCTTGCCTCCACCCTTCGTGCCTACACTTTCAGGGCGCACAGATGTCAGCAACTTCGATGAG
GAGTTCACTGGGGAGGCCCCCACACTGAGTCCTCCCCGGGATGCACGGCCCCTCACAGCTGCGGAGCAGG
CAGCCTTCCGGGATTTCGACTTTGTGGCCGGAGGCTAC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

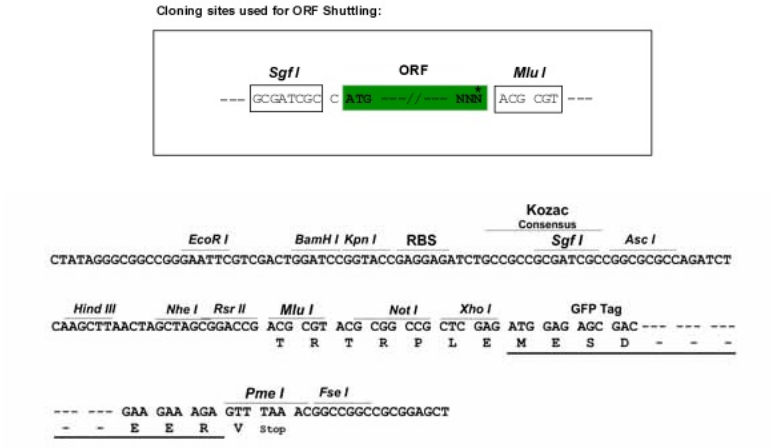
>MG211277 representing NM_177262
Red=Cloning site Green=Tags(s)

MAGDAVQSEPRSWSLLEQLGLAGADLAAPGVQQQLELERERLKREIRKELKLKEGAENLRRATTDLGRSL
APVELLLRGSARRLDLLHQQLQELHAHVVLPDPAAGSDATQSLAEGSPICSSTNLSRVAGLEKQLAIELK
VKQGAENMIQTYSNGSSKDRKLLLTAQQMLQDSKTKIDIIRMQLRRALQALQAGELESQAAPDEAQGDPE
LGAVELRIEELRHHFRVEHAVAEGAKNVLRLLSGAKAPDRKAVSEAQEKLTESNQKLGLLRESLERRLGE
LPADHPKGRLLREELTAASSSAFSAILPGPFPATHYSTLSKPAPLTGTLEVRVVGCKNLPETIPWSPPPS
VGASGTPESRTPFLSRPARGLYSRSGSLSGRSSLRGEAENATEVSTVLKLDNTVVGQTAWKPCGPNAWDQ
SFTLELERARELELAVFWRDQRGLCALKFLKLEDFLDNERHEVQLDMEPQGCLVAEVTFRNPIIERIPRL
QRQKKIFSKQQGKAFQRARQMNIDVATWVRLLRRLIPSAVATGTFSPNASPGAEIRHTGDISMEKLNLGA
DSDSSSQKSPPGLPSTSCSLSSPTHESTTSPELPSETQETPGPGLCSPLRKSPLTLEDFKFLAVLGRGHF
GKVLLSEFRSSGELFAIKALKKGDIVARDEVESLMCEKRILAAVTRAGHPFLVNLFGCFQTPEHVCFVME
YSAGGDLMLHIHSDVFSEPRAVFYSACVVLGLQFLHEHKIVYRDLKLDNLLLDTEGYVKIADFGLCKEGM
GYGDRTSTFCGTPEFLAPEVLTDTSYTRAVDWWGLGVLLYEMLVGESPFPGDDEEEVFDSIVNDEVRYPR
FLSAEAIGIMRRLLRRNPERRLGSTERDAEDVKKQPFFRSLGWDVLLARRLPPPFVPTLSGRTDVSNFDE
EFTGEAPTLSPPRDARPLTAAEQAAFRDFDFVAGGY

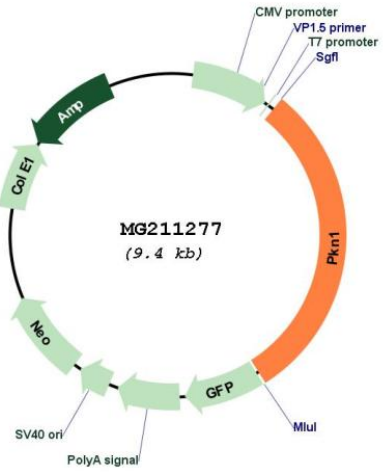
TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN:	NM_177262
ORF Size:	2838 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:	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_177262.4, NP_796236.2
RefSeq Size:	3436 bp
RefSeq ORF:	2841 bp
Locus ID:	320795
UniProt ID:	P70268
Cytogenetics:	8 40.22 cM

Gene Summary: PKC-related serine/threonine-protein kinase involved in various processes such as regulation of the intermediate filaments of the actin cytoskeleton, cell migration, tumor cell invasion and transcription regulation. Part of a signaling cascade that begins with the activation of the adrenergic receptor ADRA1B and leads to the activation of MAPK14. Regulates the cytoskeletal network by phosphorylating proteins such as VIM and neurofilament proteins NEFH, NEFL and NEFM, leading to inhibit their polymerization. Phosphorylates 'Ser-575', 'Ser-637' and 'Ser-669' of MAPT/Tau, lowering its ability to bind to microtubules, resulting in disruption of tubulin assembly. Acts as a key coactivator of androgen receptor (ANDR)-dependent transcription, by being recruited to ANDR target genes and specifically mediating phosphorylation of 'Thr-11' of histone H3 (H3T11ph), a specific tag for epigenetic transcriptional activation that promotes demethylation of histone H3 'Lys-9' (H3K9me) by KDM4C/JMJD2C. Phosphorylates HDAC5, HDAC7 and HDAC9, leading to impair their import in the nucleus. Phosphorylates 'Thr-38' of PPP1R14A, 'Ser-159', 'Ser-163' and 'Ser-170' of MARCKS, and GFAP. Able to phosphorylate RPS6 in vitro.[UniProtKB/Swiss-Prot Function]