

Product datasheet for **MG211351**

Pkn2 (BC052073) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Pkn2 (BC052073) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Pkn2
Synonyms:	6030436C20Rik; AI507382; PRK2; Prkcl2; Stk7
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



[View online »](#)

ORF Nucleotide Sequence:

>MG211351 representing BC052073
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGCGTCCAACCCCGACCGGGGGAGATCCTCCTCACCGAGCTGCAGGGAGATCCCGGACTCTTCCAT
 TTTCTGAGAATGTGAGTCTGTTTCAGAAATTGGACGACATCAAGGATCGAATAAAGAGAGAAATAAGGAA
 AGAACTGAAAATCAAAGAAGGAGCTGAAAACCTGAGGAAAGTTACAACAGATAAGAAAAATTTGGCTTAT
 GTAGACAACATTTTGAATAAATAAATAAATAAATAAATAAATAAATAAATAAATAAATAAATAAATAAATAA
 CACACATCGTTGTATCGGATCCAGAGGACTCCACAGATTGTCCGAGGACTCCAGATACTCCAAAATAGTGA
 CTCTCGTAGTTCTACTAGCAACAATAGACTGATGGCCTTACAGAAAACACTGGATATAGAACTTAAAGTA
 AAGCAGGGTGCAGAGAACATGATACAGATGTACTCAAATGGCTCTTCAAAGGATCGGAACTCCATGGTA
 CAGCGCAGCAACTGCTACAGGATAGCAAGACAAAAATAGAAGTCATCCGGATGCAGATTCTTCAGGCCGT
 CCAGACCAATGAGCTGGCTTTTGATAATGCAAAACCTGTGATAAGCCCTCTTGAGCTTCGGATGGAAGAA
 TTAAGACATCATTTTAAGATAGAATTTGCAGTAGCCGAAGGTGCAAGAAATGTCATGAAGTTACTTGGCT
 CAGGAAAAGTAACAGACAGAAAAGCGCTTTCAGAAACACAAAGCGAGATTTAATGAATCAAGTCAGAAGTT
 GGACCTTTTAAAGTATTCAGTAGAGCAAAGGTTAAATGAGCTCCCCAGGAATCACCCAAAAGCAGTGTCT
 GTCATTGAGGAGCTTTCAGTGGTTCGTCACCAACCTGAGTCCACGGCAGAGCATGCTGTCCACGCAGA
 ACCAGTATAGCACACTGTCCAAGCCAGCGGGCGTAACCGGTACTTTGGAAGTTCGCTTATGGGGTGCCA
 AGATATCCTAGAGAATGTACCTGGACGGTCAAAGCAACGTCCGTAGCACTACCTGGGTGGAGTCCAAGT
 GACAACAGATCGTCTTTATGAGCAGAACCAGCAAGAGTAAAAGTGGGAGTAGTCGCAACCTCCTGAAAA
 CGGATGACTTTGCAATGATGTTTGTGCTGTTTTGAAGCTAGATAAATCTGTGGTGGTCAAACCTGCTG
 GAAACCCATTTCAAATCAGTCCGTGGGACCAAGAAGTTTACACTGGAACACTAGACAGGTCACGTGAAGTGGAA
 ATTTTCAGTTTATTGGCGTGATTGGCGATCTCTGTGTGCTGTAATAATTTCTGAGGTTAGAAGATTTTTAG
 ACAACCAGCGGCATGGCATGTGTCTCTATTTGGAACCACAGGGTACTTTGTTTGCAGAGGTTACTTTTTT
 TAATCCAGTTATTGAAAGACGACCAAACTCCAAGACAAAAGAAAAATTTTTTCAAACAACAAGGCAAA
 ACATTTCTCAGAGCTCCTCAGATGAATATTAATATTGCCACTTGGGGAAGACTAGTGAGACGAGCTATTC
 CCACAGTAAATCATTCTGGCACATTAGCCCTCAGACTCCTGTGCCTGCAACAGTGCCAGTCTGTGACGC
 ACGCATTCTGATCTAGCACCTCCGGCCAGTGACTCTACAGTAACCAAATGGACTTTGATCTTGAACCT
 GAACCTCCTCCAGCCCCACTCGTGCTTCTCCCTTGGAGAGACAGATGAATCTTCTGAATTGAGAGTTT
 TGGATATACCTGGACAGGTTTCAGAAACTGTTTTCAATATTGAGAATGACAGAAAATACCTCGCTCCAAA
 ATCCAAATCTGAATATGAGCTGAGCATTCTGACTCAGGTCGAAGCTGCTGGGGTGTGGAGAGCTTGAT
 GACAAGAGAGCTCAGCAGAGGTTTCAGTTCAGTCTACAGGACTTCAGGTGCTGTGCTGTCTTGGGGAGAG
 GACACTTTGAAAAGGTGCTGTTGGCGGAATATAAACACACAAATGAAATGTTTGAATAAAAAGCCTTAAA
 GAAAGGAGACATTGTGGCAGGATGAAGTAGACAGCCTGATGTGTGAAAAAAGAATTTTTGAGACTGTG
 AATAGTGCAGGCACCCGTTTCTAGTGAACCTTTTGCATGTTTCCAACAAAAGAATGTTTGTCTCG
 TGATGGAGTATGCTGCAGGTGGTACCTGATGATGCACATCCATACTGATGTCTTCTGAAACCCAGAGC
 TGTATTTTATGCAGCATGTGATTTCTGGGTTGCAATACTTACATGAACACAAAATTTTATAGAGAT
 TTGAAGTTGGATAACTTGTGTAGATACAGAAGGCTTTGTGAAAATGCTGACTTTGGTCTTTCGAAAG
 AAGGAATGGGATGAGATAGGACAAGCACATTTTGTGGTACTCCTGAGTTTCTTGCCCCAGAAGTCTT
 AACAGAAACATCGTACACAAGGGCTGTAGATTGGTGGGCGCTTGGTGTACTTATATATGAGATGCTCGTC
 GGCGAGTCTCCCTTCTGTTGATGATGAAGAAGAGGTTTTTGGACAGTATTGTAATGACGAAGTAAAGT
 ATCCAAGTTCTTATCTACAGAAGCCATTTCCATAATGAGAAGGCTGCTAAGGAGAAATCCTGAGCGGC
 CCTGGGAGCTGGTGAAGAAGGATGCAGAGGATGTCAAGAAGCACCCGTTTTTCCGGCTAACCGACTGGAGT
 GCTCTAATGGACAAAAAAGTAAAGCCACCATTTGTACCTACCATTAGAGGACGGGAAGATGTTAGTAACT
 TTGATGATGAATTTACCTCAGAAGCACCTATTCTGACTCCACCTCGAGAACCAAGGATACTCTTGAAGA
 GGAGCAGGAGATGTTCCACGATTTTACTACGTTGCTGATTGGTGT

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >MG211351 representing BC052073
 Red=Cloning site Green=Tags(s)

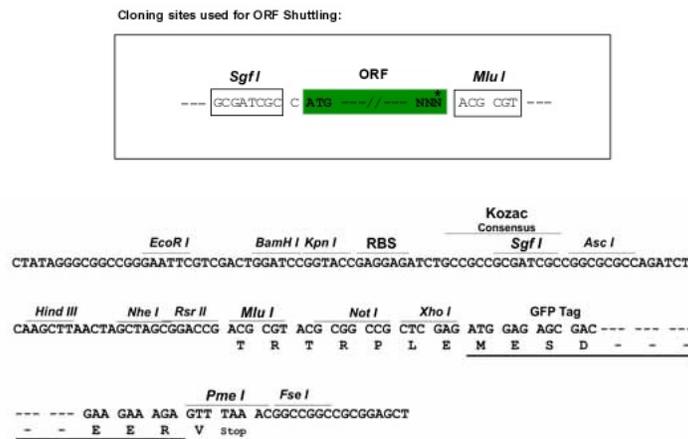
MASNPDRGEILL TELQGDSRTL PFSENVSAVQKLD DIKDRIKREIRKELKIKEGAENLRKVTTDKKNLAY
 VDNILKKSNNKLEELHHKLQELNAHIVVSDPEDSTDCPRTPTDTPNSDSRSSTSNRLMALQKQLDIKLV
 KQGAENMIQMYSNGSSKDRKLHGTAQQLLQDSKTKIEVIRMQILQAVQTNELAFDNAKPVISPLELRMEE
 LRHHFKIEFAVAEGAKNVMKLLGSGKVTDRKALSEAQARFNESSQKLDLLKYSLEQRLNELPRNHKSSV
 VIEELSIVASPTLSPRQSMSTQNYSTLSKPAALTGTLEVRMLMGCQDILENVPGRSKATSVALPGWSPS
 DNRSSFSRSTSKSGSSRNLLKTDDLNDVCAVLKLDNTVVGQTSWKPI SNQSWDQKFTLELDRSRELE
 ISVYWRDWRSLCAVKFLRLEDFLDNQRHGMCLYLEPQGTLFAEVTFFNPVIERRPKLQRQKIFSKQQGK
 TFLRAPQMNIINIATWGLVRRAIPTVNHSHTFSPQTPVPATVPVVDARIPDLAPPASDSTVTKLDFDLEP
 EPPPAPPASSLGETDESSELRLVDIPGGGSETFVNIENDRNLRPKSKSEYELSIPDSGRSCWVGVELD
 DKRAQQRFQFSLQDFRCCAVLGRGHFGKVL LAEKHTNEMFAIKALKKGDIVARDEVDLSMCEKRIFETV
 NSVRHPFLVNLFACFQTKHVCFVMEYAAGDLMHMIHTDVFSEPRAVFYAACVVLGLQYLHEHKIVYRD
 LKLDNLLLDTEGFVKIADFLCKEKGMYGDRSTFCGTPFLAPEVLTETSYTRAVDWWGLVLIYEMLV
 GESPFPGDDEEEVFDIVNDEVYRFLSTEAISIMRLLRRNPERRLGAGEKDAEDVKKHPFFRLTDWS
 ALMDKKVKPPFVPTIRGREDVSNFDDFTSEAPILTPPREPRILLEEEQEMFHDFDYVADWC

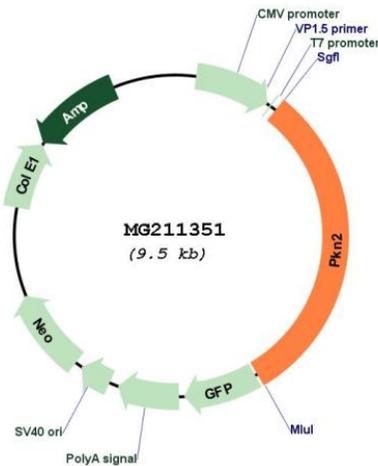
TRTRPLE - GFP Tag - V

Restriction Sites:

SgfI-MluI

Cloning Scheme:



Plasmid Map:


ACCN: BC052073

ORF Size: 2916 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: [BC052073.1](#)

RefSeq Size: 3773 bp

RefSeq ORF: 2918 bp

Locus ID: 109333

Cytogenetics: 3 66.69 cM

Gene Summary:

PKC-related serine/threonine-protein kinase and Rho/Rac effector protein that participates in specific signal transduction responses in the cell. Plays a role in the regulation of cell cycle progression, actin cytoskeleton assembly, cell migration, cell adhesion, tumor cell invasion and transcription activation signaling processes. Phosphorylates CTTN in hyaluronan-induced astrocytes and hence decreases CTTN ability to associate with filamentous actin. Phosphorylates HDAC5, therefore lead to impair HDAC5 import. Direct RhoA target required for the regulation of the maturation of primordial junctions into apical junction formation in bronchial epithelial cells. Required for G2/M phases of the cell cycle progression and abscission during cytokinesis in a ECT2-dependent manner. Stimulates FYN kinase activity that is required for establishment of skin cell-cell adhesion during keratinocytes differentiation. Regulates epithelial bladder cells speed and direction of movement during cell migration and tumor cell invasion. Inhibits Akt pro-survival-induced kinase activity. Mediates Rho protein-induced transcriptional activation via the c-fos serum response factor (SRF). Involved in the negative regulation of ciliogenesis (By similarity).[UniProtKB/Swiss-Prot Function]