

Product datasheet for **RC207788**

PKN1 (NM_002741) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	PKN1 (NM_002741) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	PKN1
Synonyms:	DBK; PAK-1; PAK1; PKN; PKN-ALPHA; PRK1; PRKCL1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



[View online »](#)

ORF Nucleotide Sequence:

>RC207788 representing NM_002741
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGCCAGCGACGCCGTGCAGAGTGAGCCTCGCAGCTGGTCCCTGCTAGAGCAGCTGGCCCTGGCCGGG
 CAGACCTGGCGGCCCGGGGTACAGCAGCAGCTGGAGCTGGAGCGGGAGCGGCTCGCGCCGGAAAATCCG
 CAAGGAGCTGAAGCTGAAGGAGGGTGTGAGAACCTGCGCGGGCCACCACTGACCTGGCCCGCAGCCTG
 GGCCCGTAGAGCTGCTGCTGCGGGGCTCCTCGCGCCGCCTCGACCTGCTGCACCAGCAGCTGCAGGAGC
 TGCACGCCACGTGGTGTTCGCCAGCCGGCGGCCACCCACGATGGCCCCAGTCCCCTGGTGGGGTGG
 CCCCACCTGCTCGGCCACCAACCTGAGCCGCGTGGCGGGCCTGGAGAAGCAGTTGGCCATTGAGCTGAAG
 GTGAAGCAGGGGGCGGAGAACATGATCCAGACCTACAGCAATGGCAGCACCAGGACCGGAAGCTGCTGC
 TGACAGCCAGCAGATGTTGAGGACAGTAAGACCAAGATTGACATCATCCGCATGCAACTCCGCCGGGC
 GCTGCAGGCCGGCCAGCTGGAGAACCAGGCAGCCCGGATGACACCAAGGGAGTCTGACTGGGGGCT
 GTGGAGCTGCGCATCGAAGAGCTGCGGCACCACTTCCGAGTGGAGCACCGGGTGGCCGAGGGTGCCAAGA
 ACGTACTGCGCCTGCTCAGCGCTGCCAAGGCCCGGACCACCAAGGCAGTCAAGGAGGCCCAGGAGAATT
 GACAGAATCCAACCAGAAGCTGGGGTGTGCGGGAGGCTCTGGAGCGGAGACTTGGGGAGCTGCCCGCC
 GACCACCCCAAGGGGCGGCTGCTGCGAGAAGAGCTCGCTGCGGCCTCCTCCGCTGCCTTACGACCCGCC
 TGGCCGGGCCCTTCCCGCCACGCACTACAGCACCTGTGCAAGCCCGCGCCGCTCACAGGGACCTGGA
 GGTACGAGTGGTGGGCTGCAGAGACCTCCAGAGACCATCCCGTGAACCCCTACCCCTCAATGGGGGA
 CCTGGACCCAGACAGCCGCCCCCTTCTGAGCCGCCAGCCCGGGGCTTTACAGCCGAAGCGGAA
 GCCTCAGTGGCCGAGCAGCCTCAAAGCAGAAGCCGAGAACCAGTGAAGTCAGCACTGTGCTTAACT
 GGATAACACAGTGGTGGGCAGACGCTTGGAAAGCCATGTGGCCCAATGCCTGGGACCAGAGCTTCACT
 CTGGAGCTGGAAGGGCACGGAACTGGAGTTGGCTGTGTTCTGGCGGGACCAGCGGGGCTGTGTGCC
 TCAAATTCCTGAAGTTGGAGATTTCTTGGACAATGAGAGGCATGAGGTGCAGCTGGACATGGAACCCCA
 GGGCTGCCTGGTGGTGAAGTACCTTCCGCAACCCTGTCATTGAGAGGATTCTCGGCTCCGACGGCAG
 AAGAAAATTTTCTCAAGCAGCAAGGGAAGGCGTTCAGCGTGTAGGCAGATGAACATCGATGTCGCCA
 CGTGGGTGCGGCTGCTCCGAGGCTCATCCCAATGCCACGGGCACAGGCACCTTAGCCCTGGGGTTC
 TCCAGGATCCGAGGCCCGACCACGGGTGACATATCGGTGGAGAAGCTGAACCTCGGCAGTACTCGGAC
 AGCTCACCTCAGAAGAGCTCGCGGATCCTCCTCCAGCCATCGAGCCTGAGCTCCCCATCCAGGAAT
 CCACTGCTCCCGAGCTGCCTTCGAGACCCAGGAGACCCAGGCCCGCCCTGTGACGCCCTCTGAGGAA
 GTCACCTCTGACCCTCGAAGATTTCAAGTTCCTGGCGGTGCTGGGCCGGGGTCAATTTGGGAAGGTGCTC
 CTCTCCGAATTCGGCCAGTGGGGAGCTGTTCCGCATCAAGGCTCTGAAGAAAGGGGACATTGTGGCC
 GAGACGAGGTGGAGAGCTGATGTGTGAGAAGCGGATATTGGCGCAGTACAGTGCAGGACACCCCTT
 CCTGGTGAACCTTTCGGCTGTTCCAGACACCGGAGCAGTGTGCTTCTGATGGAGTACTCGGCCGT
 GGGGACCTGATGCTGCACATCCACAGCGACGTGTTCTGAGCCCGTGCCATCTTTTATCCGCCTGCG
 TGGTGTGGCCCTACAGTTTCTTACGAACACAAGATCGTCTACAGGGACCTGAAGTTGGACAATTTGCT
 CCTGGACACCGAGGGCTACGTCAAGATCGCAGACTTTGGCCTCTGCAAGGAGGGGATGGGCTATGGGGAC
 CGGACCAGCACATTCGTGGGACCCCGGAGTTCTGGCCCTGAGGTGCTGACGGACACGTCGTACACGC
 GAGCTGTGGACTGGTGGGACTGGGTGTGCTGCTACGAGATGCTGGTTGGCGAGTCCCCATCCAGG
 GGATGATGAGGAGGAGTCTTCGACAGCATCGTCAACGACGAGGTTGCTACCCCGCTTCTGTGCGCC
 GAAGCCATCGGCATCATGAGAAGGCTGTTTCGAGGAACCCAGAGCGGAGGCTGGGATCTAGCGAGAGAG
 ATGCAGAAGATGTGAAGAAACAGCCCTTCTTCAAGACTCTGGGCTGGGAAGCCCTGTTGGCCCGGCCCT
 GCCACCGCCCTTGTGCCACGCTGTCCGGCCGACCCGACATCAGCAACTTCGACGAGGAGTTACCCGGG
 GAGGCCCCACACTGAGCCCGCCCGCAGCGCGGCCCTCACAGCCGGGAGCAGGCAGCCTTCTCTGG
 ACTTCGACTTCGTGGCCGGGGTGC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC207788 representing NM_002741
 Red=Cloning site Green=Tags(s)

```
MASDAVQSEPRSWSLLEQLGLAGADLAAPGVQQQLELERERLRREIRKELKKEGAENLRRATDDLGRSL
GPVELLLRGSSRRLDLLHQQLQELHAHVLPDPAATHDGPQSPGAGGPTCSATNL SRVAGLEKQLAIELK
VKQGAENMIQTYNSGSKDRKLLLTAQQMLQDSKTKIDIIRMQLRRALQAGQLENQAAPDDTQGSDDLGA
VELRIEELRHHFRVEHAVAEGAKNVLRLLSAAKAPDRKAVSEAQEKL TESNQKLGLLREALERRLGELPA
DHPKGRLLREELAAASSAAFSTRLAGPPATHYSTLCKPAPLTGTLEVRVVGCRDLPETIPWNPTPSMGG
PGTPDSRPPFLSRPARGLYSRSGSLSGRSSLKAEAEENTSEVSTVLKLDNTVVGQTSWKPCGPNAWDQSFT
LELERARELELAVFWRDQRGLCALFKLLEDFLDNERHEVQLDMEPQGCLVAEVTFRNPVIERIPRLRRQ
KKIFSKQGGKAFQARQMNIDVATWVRLRLRIPNATGTGTFSPGASPGSEARTTGDISVEKLNLTGDS
SSPQKSSRDPSSPSSLSSPIQESTAPELPSETQETPGPALCSPLRKSPLTLEDFKFLAVLGRGHFGKVL
LSEFRPSGELFAIKALKKGDIVARDEVESLMCEKRILAAVTSAGHPFLVNLFGCFQTPEHVCFVMEYSAG
GDLMLHIHSDVFSEPRIFYSACVVLGLQFLHEHKIVYRDLKLDNLLDTEGYVKIADFGLCKEKGMYGD
RTSTFCGTPFLAPEVLTDTSYTRAVDWWGLGVLLYEMLVGESPFPGDDEEEVFDSIVNDEVRYPRFLSA
EAIIGIMRRLRRNPERRLGSSERDAEDVKKQPFRTLGWEALLARRLPPFPVPTLSGRTDISNFDEEFTG
EAPTLSPPRDARPLTAAEQAAFDFDFVAGGC
```

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mg4045_e05.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



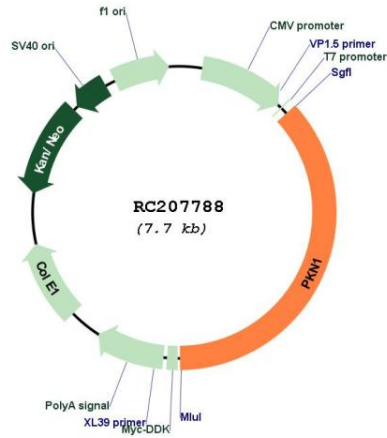
* The last codon before the Stop codon of the ORF

ACCN: NM_002741

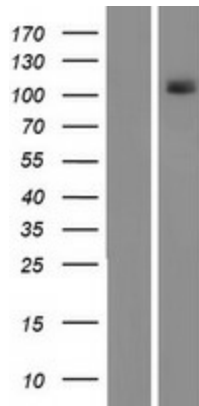
ORF Size: 2826 bp

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_002741.5
RefSeq Size:	3097 bp
RefSeq ORF:	2829 bp
Locus ID:	5585
UniProt ID:	Q16512
Cytogenetics:	19p13.12
Domains:	pkinase, HR1, S_TK_X, TyrKc, S_TKc
Protein Families:	Druggable Genome, Protein Kinase
MW:	103.8 kDa
Gene Summary:	The protein encoded by this gene belongs to the protein kinase C superfamily. This kinase is activated by Rho family of small G proteins and may mediate the Rho-dependent signaling pathway. This kinase can be activated by phospholipids and by limited proteolysis. The 3-phosphoinositide dependent protein kinase-1 (PDPK1/PDK1) is reported to phosphorylate this kinase, which may mediate insulin signals to the actin cytoskeleton. The proteolytic activation of this kinase by caspase-3 or related proteases during apoptosis suggests its role in signal transduction related to apoptosis. Alternatively spliced transcript variants encoding distinct isoforms have been observed. [provided by RefSeq, Jul 2008]

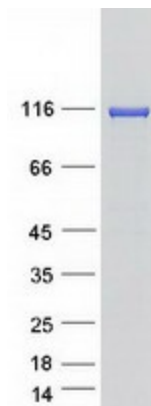
Product images:



Circular map for RC207788



Western blot validation of overexpression lysate (Cat# [LY419135]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC207788 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified PKN1 protein (Cat# [TP307788]). The protein was produced from HEK293T cells transfected with PKN1 cDNA clone (Cat# RC207788) using MegaTran 2.0 (Cat# [TT210002]).