

Product datasheet for RC223303

PYK2 (PTK2B) (NM_173176) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	PYK2 (PTK2B) (NM_173176) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	PYK2
Synonyms:	CADTK; CAKB; FADK2; FAK2; PKB; PTK; PYK2; RAFTK
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC223303 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCCGCATCGCC

ATGTCGTTGGGGTGTCCGAGCCCCTGAGTCGAGTAAAGTTGGGCACGTTACGCCGGCCTGAAGGCCCTGCAG
AGCCCATGGTGGTGTACCAGTAGATGTGGAAAAGGAGGACGTGCGTATCCTCAAGGTCTGCTTCTATAG
CAACAGCTTCAATCCTGGGAAAACTTCAAACCTGGTCAAATGCACTGTCCAGACGGAGATCCGGGAGATC
ATCACCTCCATCCTGCTGAGCGGGCGGATCGGGCCCAACATCCGTTGGCTGAGTGTATGGGCTGAGGC
TGAAGCAGATGAAGTCCGATGAGATCCACTGGCTGCACCCACAGATGACAGTGGGTGAGGTGCAGGACAA
GTATGAGTGTCTGCACGTGGAAGCCGAGTGGAGGTATGACCTTCAAATCCGCTACTTGCCAGAAGACTTC
ATGGAGAGCCTGAAGGAGGACAGGACCAGCTGCTCTATTTTTACCAACAGCTCCGGAACGACTACATGC
AGCGCTACGCCAGCAAGGTGAGCGAGGGCATGGCCCTGCAGCTGGGCTGCCTGGAGCTCAGGCGGTTCTT
CAAGGATATGCCCCACAATGCACCTTGACAAGAAGTCCAACCTCGAGCTCCTAGAAAAGGAAGTGGGGCTG
GACTTGTTTTTCCCAAAGCAGATGCAGGAGAAGTAAAGCCAAACAGTTCGGAAGATGATCCAGCAGA
CCTTCCAGCAGTACGCCCTCGCTCAGGGAGGAGGAGTGCATGAAGTCTTCAACACTCTCGCCGGCTT
CGCCAACATCGACCAGGAGACCTACCGCTGTGAACCTATTCAAGGATGGAACATTACTGTGGACCTGGTC
ATTGGCCCTAAAGGGATCCGCCAGCTGACTAGTCAGGACGCAAAGCCACCTGGCCGAGTTCAAGC
AGATCAGGTCCATCAGGTGCCTCCCGCTGGAGGAGGGCCAGGCAGTACTTCAGCTGGGCATTGAAGGTGC
CCCCAGGCCCTTGTCCATCAAAACCTCATCCCTAGCAGAGGCTGAGAACATGGCTGACCTCATAGACGGC
TACTGCCGGCTGCAGGCTGAGCACCAAGGCTCTCTCATCATCCATCCTAGGAAAGATGGTGAAGAAGCGGA
ACAGCCTGCCAGATCCCCATGCTAAACCTGGAGGCCCGCGGTCACCTCTCAGAGAGCTGCAGCAT
AGAGTCAGACATCTACGCAGAGATTCCCGACGAAACCTGCGAAGGCCCGGAGGTCCACAGTATGGCATT
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ACACAAATCATAAAGGGAGAAAATCAATGTAGCTGTCAAGACCTGCAAGAAAGACTGCACTCTGGACAA
CAAGGAGAAGTTCATGAGCGAGGACGTGATCATGAAGAACCTCGACCACCGCACATCGTGAAGCTGATC



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GGCATCATTGAAGAGGAGCCACCTGGATCATCATGGAATTGTATCCCTATGGGGAGCTGGGCCACTACC
 TGGAGCGGAACAAGAAGCTCCCTGAAGGTGCTCACCTCGTGTACTACTGCAGATATGCAAAGCCAT
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 GAGTGTGTGAAGCTGGGGGACTTTGGTCTTTCCCGGTACATTGAGGACGAGGACTATTACAAAGCCTCTG
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 TTTATACCCTCATGACCCGCTGCTGGGACTACGACCCAGTGACCGGCCCGCTTACCAGACTGGTGTG
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 CCCCTCCGCAAACCAACCTCCTGGCTCCAAAGCTGCAGTTCAGGTTCTGAGGGTCTGTGTGCCAGCTC
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 AAGAATGTGGGGCTGACCTGCGGAAGCTCATCGGGAGCGTGGATGATCTCCTGCCTTCTTGCCGTCAT
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 CACACCTGGCTGTGGACGCCAAGAACCTGCTCGACGCTGTGGACCAGGCCAAGGTTCTGGCCAATCTGG
 CCCACCCACCTGCAGAG

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC223303 protein sequence
 Red=Cloning site Green=Tags(s)

MSGVSEPLSRVKLGLTRRPEGPAEPMVVVVDVEKEDVRIILKVCFYNSFNPGKNFKLVKCTVQTEIREI
 ITSILLSGRIGPNIRLAECYGLRLKHKMSDEIHWLHPQMTVGEVQDKYECLHVEAEWRYDLQIRYLPEDF
 MESLKEDRTLLYFYQLRNDYMQRYASKVSEGMALQLGCELRFFKDMPHNALDKSNFELLEKEVGL
 DLFFPKMQENLKPKQFRKMIQQTFQYASLREEECVMKFFNTLAGFANIDQETYRCEL IQGWNITVDLV
 IGPKGIRQLTSQDAKPTCLAEFKQIRSIKPLLEEGQAVLQLGIEGAPQALSIKTSSLAEANMADLIDG
 YCRLQGEHQGSLIIHPRKDGEKRNSLPQIPMLNLEARRSHLSESCSIESDIYAEIPDETLLRRPGGPQYGI
 AREDVVLNRILGEGFFGEVYEGVYTNHKGEKINAVKTKCKDCTLDNKEKFMSEAVIMKNLDHPHIVKLI
 GIIEEPTWIIMELYPYGELGHYLERKNLSLKVLTLLVLSLQICKAMAYLESINCVHRDIAVRNIVAS
 P ECVKLGDFGLSRYIEDYKASVTRLPIKWMSPESINFRFTTASDVWMAVCMWEILSFGKQPFWLE
 NKDVIQVLEKGDRLPKPDLCPPVLYTLMTRCWDYDPSDRPRFTELVCSLSDVYQMEKDIAEQERNARYR
 TPKILEPTAFQEPPPKSRPKYRPPQTNLLAPKLQFQVPEGLCASSPTLTSPMEYSPVNSLHTPLHR
 HNVFKRHSREEDFIQPSREEAQLWEAEKVKMRQILDQKQKQMVEDYQWLRQEEKSLDPMVYMNDKSP
 LTPEKEVGYLEFTGPPQKPPRLGAQSIQPTANLDRDLDL VYLVNLMELVRAVLELKNELCQLPPEGYVVV
 KNVGLTLRKLIGSVDDLPLSPSSSRTEIEGTQKLLNKDLAELINKMRLAQONAVTSLSECKRQMLTAS
 HTLAVDAKNLLDAVDQAKVLANLAHPPAE

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

SgfI-MluI

Cloning Scheme:



ACCN: NM_173176

ORF Size: 3027 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.

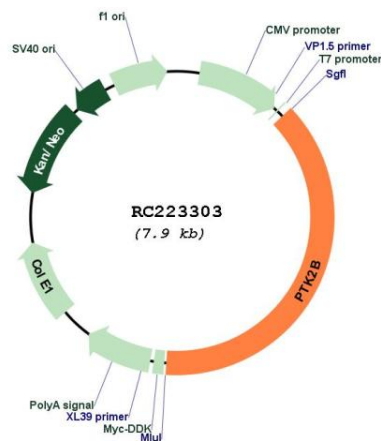
RefSeq: [NM_173176.3](#)

RefSeq Size: 4180 bp

RefSeq ORF: 3030 bp

Locus ID:	2185
UniProt ID:	Q14289
Cytogenetics:	8p21.2
Protein Families:	Druggable Genome, Protein Kinase
Protein Pathways:	Calcium signaling pathway, Chemokine signaling pathway, GnRH signaling pathway, Leukocyte transendothelial migration, Natural killer cell mediated cytotoxicity
MW:	115.9 kDa
Gene Summary:	This gene encodes a cytoplasmic protein tyrosine kinase which is involved in calcium-induced regulation of ion channels and activation of the map kinase signaling pathway. The encoded protein may represent an important signaling intermediate between neuropeptide-activated receptors or neurotransmitters that increase calcium flux and the downstream signals that regulate neuronal activity. The encoded protein undergoes rapid tyrosine phosphorylation and activation in response to increases in the intracellular calcium concentration, nicotinic acetylcholine receptor activation, membrane depolarization, or protein kinase C activation. This protein has been shown to bind CRK-associated substrate, nephrocystin, GTPase regulator associated with FAK, and the SH2 domain of GRB2. The encoded protein is a member of the FAK subfamily of protein tyrosine kinases but lacks significant sequence similarity to kinases from other subfamilies. Four transcript variants encoding two different isoforms have been found for this gene. [provided by RefSeq, Jul 2008]

Product images:



Circular map for RC223303