

## Product datasheet for **RC221519**

### **PANK1 (NM\_138316) Human Tagged ORF Clone**

#### Product data:

Product Type:	Expression Plasmids
Product Name:	PANK1 (NM_138316) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	PANK1
Synonyms:	PANK
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC221519 representing NM_138316 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGGATCGCC**

ATGAAGCTTATAAATGGCAAAAAGCAAACATTCCCATGGTTTGGCATGGACATCGGTGGAACGCTGGTTA  
AATTGGTGTATTTTCGAGCCGAAGGATATTACAGCCGAAGAGGAGCAAGAGGAAGTGGAGAACCTGAAGAG  
CATCCGGAAGTATTTGACTTCTAATACTGCTTATGGGAAAAGTGGGATCCGAGACGTCCACCTGGAAGT  
AAAAACCTGACCATGTGTGGACGCAAAGGGAACCTGCACCTCATCCGCTTCCAGCTGTGCTATGCACA  
GGTTCATTAGATGGGCAGCGAGAAGAAGTCTCTAGCCTTACACACCACCTCTGTGCCACAGGAGGCGG  
GGCTTTCAAATTCGAAGAGGACTTCAGAATGATTGCTGACCTGCAGCTGCATAAACTGGATGAACCTGGAC  
TGCTGATTACAGGCCTGCTTTATGTCGACTCTGTTGGCTTCAACGCAAGCCAGAAATGTTACTATTTTG  
AAAATCCACAAAATCCTGAATTGTGCAAAAAAGCCGTAAGCTTGTATAACCCATACCCTATGTTGCT  
GGTTAACATGGGCTCAGGTGTCAGCATTCTAGCCGTGTAAGGACAACATAAAAAGAGTTACAGGG  
ACCAGCTTTGGCAACATGATGAGTAAAGAAAAGCGAGATTCCATCAGCAAGGAAGACCTCGCCCGGGCCA  
CATTGGTCACCATACCAACAACATTGGCTCCATTGCTCGGATGTGCGGTTGAATGAGAACATAGACAG  
AGTTGTGTTTGTGGAAATTTTCTCAGAATCAATATGGTCTCCATGAAGCTGCTGGCATATGCCATGGAT  
TTTTGGTCAAAGGACAAGTAAAGCTCTGTTTTTGGAAACATGAGGGTATTTTGGAGCCGTTGGGGCAC  
TGTTGAACTGTTCAAATGACTGATGACAAG

**ACGCGT**ACGCGGCCGCTCGAGCAGAAAAGTCACTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >RC221519 representing NM\_138316  
Red=Cloning site Green=Tags(s)

MKLLINGKKQTFPWFQMDIGGTLVKLVYFEPKDIATAEQEEVENLKSIRKYLTSNTAYGKTGIRDVHLEL  
 KNLTMCGRKGNLHFIKRFPCAMHRFIQMGSEKNFSSLHTTLCATGGGAFKFEEDFRMIADLQLHKLDEL  
 CLIQGLLYVDSVGFNGKPECYFENPTNPELQKPKPYCLDNPYPMLLVNMGSGVSI LAVYSKDNYKRVTG  
 TSFGNMMSKEKRDSISKEDLARATLVITINNIGSIARMCALNENIDRVVFGNFLRINMVMKLLAYAMD  
 FWSKGQLKALFLEHEGYFGAVGALLELFKMTDDK

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/ja1268\\_d07.zip](https://cdn.origene.com/chromatograms/ja1268_d07.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\_138316

**ORF Size:** 942 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\\_138316.4](#)

**RefSeq Size:** 2525 bp

**RefSeq ORF:** 945 bp

**Locus ID:** 53354

**UniProt ID:** [Q8TE04](#)

**Cytogenetics:** 10q23.31

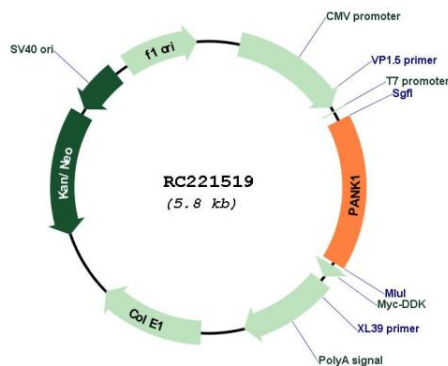
**Protein Families:** Druggable Genome

**Protein Pathways:** Metabolic pathways, Pantothenate and CoA biosynthesis

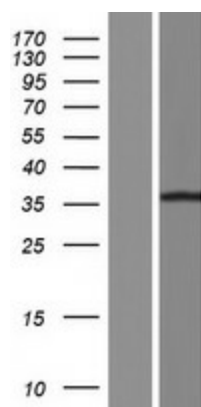
**MW:** 35.4 kDa

**Gene Summary:** This gene encodes a member of the pantothenate kinase family. Pantothenate kinases are key regulatory enzymes in the biosynthesis of coenzyme A (CoA). The encoded protein catalyzes the first and rate-limiting enzymatic reaction in CoA biosynthesis and is regulated by CoA through feedback inhibition. Alternatively spliced transcript variants encoding multiple isoforms have been observed for this gene. This gene and an intronic miRNA on the same strand are co-regulated by the tumor suppressor p53 (see PMID 20833636). [provided by RefSeq, Apr 2011]

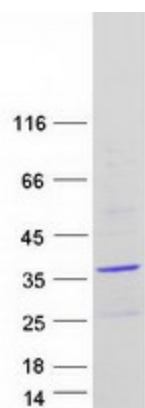
### Product images:



Circular map for RC221519



Western blot validation of overexpression lysate (Cat# [LY408718]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC221519 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified PANK1 protein (Cat# [TP321519]). The protein was produced from HEK293T cells transfected with PANK1 cDNA clone (Cat# RC221519) using MegaTran 2.0 (Cat# [TT210002]).