

Product datasheet for **SC306633**

PANK2 (NM_153640) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	PANK2 (NM_153640) Human Untagged Clone
Tag:	Tag Free
Symbol:	PANK2
Synonyms:	C20orf48; HARP; HSS; NBIA1; PKAN
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Fully Sequenced ORF:	>SC306633 representing NM_153640. Blue=Insert sequence Red=Cloning site Green=Tag(s)

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GCTCGTTTGTAGTGAACCGTCAGAATTTTGTAAACGACTCACTATAGGGCGCCGGGAATTCGTCGACTG
GATCCGGTACCGAGGAGATCTGCCGCCGCGATCGCC
ATGCCTGCTTTTATTCAAATGGGCAGAGATAAAAACTTCTCGAGTCTCCACACTGTCTTTGTGCCACT
GGAGGTGGAGCGTACAAATTTGAGCAGGATTTTCTACAATAGGTGATCTTCAGCTTTGCAAACCTGGAT
GAACTAGATTGCTTGATCAAAGGAATTTTATACATTGACTCAGTCGGATTCAATGGACGGTCACAGTGC
TATTACTTTGAAAACCTGCTGATTCTGAAAAGTGTGAGAAGTTACCATTGATTTGAAAAATCCGTAT
CCTCTGCTTCTGGTGAACATTGGCTCAGGGGTTAGCATCTTAGCAGTATATTCCAAGATAATTACAAA
CGGGTCACAGGTAAGTCTTGGAGGAGAACTTTTTTGGTCTCTGCTGTCTTCTACTGGCTGTACC
ACTTTTGAAGAAGCTCTTGAAATGGCATCTCGTGGAGATAGCACCAAAGTGGATAAACTAGTACGAGAT
ATTTATGGAGGGGACTATGAGAGGTTTGGACTGCCAGGCTGGGCTGTGGCTTCAAGCTTTGGAAACATG
ATGAGCAAGGAGAAGCGAGAGGCTGTGAGTAAAGAGGACCTGGCCAGAGCGACTTTGATCACCATCACC
AACCAATTGGCTCAATAGCAAGAATGTGTGCCCTTAATGAAAACATTAACCAGGTGGTATTTGTTGGA
AATTTCTTGAGAATTAATACGATCGCCATGCGGCTTTTGGCATATGCTTTGGATTATTGGTCCAAGGGG
CAGTTGAAAGCACTTTTTTCGGAACACGAGGGTTATTTTGGAGCTGTTGGAGCACTCCTTGAGCTGTTG
AAGATCCCGTGA
ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGAT
TACAAGGATGACGACGATAAGGTTTAAACGGCCGCGC
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Restriction Sites:	Sgfl-MluI
Plasmid Map:	□
ACCN:	NM_153640
Insert Size:	840 bp



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OTI Disclaimer:	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
OTI Annotation:	This TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.
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:	<u>NM_153640.3</u>
RefSeq Size:	7817 bp
RefSeq ORF:	840 bp
Locus ID:	80025
UniProt ID:	<u>Q9BZ23</u>
Cytogenetics:	20p13
Protein Families:	Druggable Genome
Protein Pathways:	Metabolic pathways, Pantothenate and CoA biosynthesis
MW:	30.8 kDa

Gene Summary:

This gene encodes a protein belonging to the pantothenate kinase family and is the only member of that family to be expressed in mitochondria. Pantothenate kinase is a key regulatory enzyme in the biosynthesis of coenzyme A (CoA) in bacteria and mammalian cells. It catalyzes the first committed step in the universal biosynthetic pathway leading to CoA and is itself subject to regulation through feedback inhibition by acyl CoA species. Mutations in this gene are associated with HARP syndrome and pantothenate kinase-associated neurodegeneration (PKAN), formerly Hallervorden-Spatz syndrome. Alternative splicing, involving the use of alternate first exons, results in multiple transcripts encoding different isoforms. [provided by RefSeq, Jul 2008]

Transcript Variant: This variant (2) has an alternate first exon, and uses a downstream translation initiation site, compared to variant 1. The resulting protein (isoform 2) lacks an N-terminal segment compared to isoform 1, resulting in a shorter protein that shares identity through the C-terminus. Isoform 2 is not expressed in mitochondria. Variants 2, 3 and 7 encode isoform 2. Sequence Note: This RefSeq record was created from transcript and genomic sequence data to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on transcript alignments.