

Product datasheet for **SC310376**

PANK2 (NM_153638) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	PANK2 (NM_153638) Human Untagged Clone
Tag:	Tag Free
Symbol:	PANK2
Synonyms:	C20orf48; HARP; HSS; NBIA1; PKAN
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL5</u>
E. coli Selection:	Ampicillin (100 ug/mL)



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Fully Sequenced ORF:

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>OriGene sequence for NM_153638 edited
GGGTGGATGAGGAGGCTCGGGCCCTCCACCCACGCGTCCATTGGGCGGCGCCGCCATCA
CTCTCTTCTGGGCTACACCGCCTTCTTCTCCTCCGCGAAACCCGGATCCCCTCCTCCACC
ACCCTCTCCCCGCCCCGTACGATAGCCTCTCATTGGACGGAGGCACGGTCAATCCTCCT
CGAGTTAGGGAGCCGACTGGACGCGAGGCCTTTGGGCGTCCCCAGCCTCGTCGGATTGG
CTTCTGCGCGTTGGCGCAACGGAAGAGCGGCCGCGAGGGCGCGCCTCTGCTCTGGC
TGGACTGCCGCGGAGGAGGCGAGAAGGAATCCGACGCTGGGGGGCTTGCTCGGGCGCAG
CGACTGCTGCTGCGGATGGGAGGGGCGGCTCGGCGCGCCATGGAGCGCCACGGCAGG
GCTTCCGCCACCTCCGTCTCGTGGCTGGGGAGCAGGCGCCGGGACCCGAAGGGCGG
CGGCAGGAGCCTGCGGCGCGGGGCGAGCAGCGCGTCCGCGCGGTGCGGGGCTCG
GCTGAGGGCAGAGGCGGGATCGACTGGGCTTTACAGCGGCCACCTCGGTCTCCCGC
CAGCGCGTCGAAAGCCTGAGGAAAAAGCGCCGCTTTTTCCATGGTTGGACTGGATATC
GGTGAACCTGCTCAAGCTGGTATATTTGAACCAAAGACATCACTGCTGAAGAAGAA
GAGGAAGAAGTGGAAAGTCTAAAAGCATTGGAAGTACCTGACCTCAAATGTGGCTTAT
GGGTCTACAGGCATTGCGGACGTGCACCTCGAGCTGAAGGACCTGACTCTGTGTGGACGC
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TACAAATTTGAGCAGGATTTTCTACAATAGGTGATCTTCAGCTTTGCAAACCTGGATGAA
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CAGTGCTATTACTTTGAAAACCTGCTGATTCTGAAAAGTGTGAGAAGTTACCATTTGAT
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GTATATCCAAAGATAATTACAAACGGGTCACAGGTAAGTCTTGAGGAGGAACTTTT
TTTGGTCTGCTGTCTTCTTACTGGCTGTACCACTTTTGAAGAAGCTCTTGAATGGCA
TCTCGTGGAGATAGCACCAAAGTGGATAAACTAGTACGAGATATTTATGGAGGGGACTAT
GAGAGTTTTGGACTGCCAGGCTGGGCTGTGGCTTCAAGCTTTGGAACATGATGAGCAAG
GAGAAGCGAGAGGCTGTGAGTAAAGAGGACCTGGCCAGAGCGACTTTGATCACCATCACC
AACAACTTTGGCTCAATAGCAAGAATGTGTGCCCTTAATGAAAACATTAACCAGGTGGTA
TTTGTGGAAATTTCTTGAGAATTAATACGATCGCCATGCGGCTTTTGGCATATGCTTTG
GATTATTGGTCCAAGGGCAGTTGAAAGCACTTTTTTTCGGAACACGAGGGTTATTTTGA
GCTGTTGGAGCACTCCTTGAGCTGTTGAAGATCCCGTGATCATTACCTGGGGAGGGGTTT
CTGAAACCTTCCACAATGGGATCTGTGGACTTTCATTTTTTAAGAGACTTACTCAATTT
CATGACTGACTACCTGAAACAAAGTGAAGAAAGGACAGGTGATTTTTTCTAAGTCATCAA
GATAAATCCTTAAGAATTCAGTCTAAATAGCAACCAGGAAGGAAAAATATATTAATAAAC
AACAAAAAGTGGCACATGTCCAGGCAGTGTGAGGATTTGCTGTATATAAGTTGCCTGCT
TTGATTTTTTGAATCTCTGCATCACTCATTGGAAGTGTCTTGAAGAGAGCTGCTCTGT
GTTCAAGTGTGTTTTGTGCTCTGTTGAACTTGTGAATGTAAGGCAGGCTACTATG
CGTTATAATCTAATCACAATTTGTCAATATGGTCTTGGCAATCATCTGTGCATTACTCTG
GTTTGCATTAAGCCTGTGTGTGAACTTACTGTAACATGTTTT
    
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5' Read Nucleotide Sequence:	>OriGene 5' read for NM_153638 unedited GGTTTCATTTGTATACCACTCATATAGGGCGGCCGCGATTATGAGAGGCTCGGGCCCTT CCACCCACGCGTCCATTGGGCGGCGCCGATCACTCTTCTGGGCTACACCGCCTTCT CTTCTCCGCGGAACCCGGATCCCCTCCTCCACCACCCTCCTCCCGCCCGTACGATAG CCTCTCATTGGACGGAGGACGGTCAATCCTCCTCGAGTTAGGGAGCCGACTGGACGCGA GGCCTTTGGGCCGTCCCCAGCCTCGTGGATTGGCTTCTGCGGTTGGCGCAACGGAAG AGGCGCCGCGCCGAGGGCGCCCTCTGCTCTGGCTGGACTGCCGCGGAGGAGGCGAGAAG GAATCCGACGCTGGGGGCTTGCTCGGGCGGCAGCGACTGCTGCTGCGGATGGGAGGGGG CCGGCTCGGCGGCCCATGGAGCGCCACGGCAGGGCTTCCGCCACCTCCGTCTCGTCGGC TGGGGAGCAGGCGGCCGGGGACCCGAAGGGCGGCGCAGGAGCCACTGCGGCGCCGGGC GAGCAGCGCTCGGTGCCGCGGTGGGGCCTCGGCTTGAGGCACGAGGCGGGATCGACT GGGCTCTACAGCGGCCCCACCTCGGTCTCCCGCCGCGCTCAAAGCCTGAAGGAAA AGCGGCCCGCTTTTTCCAGGGTTGGCCTGGATATCCGTGGAACCTCTGGCAAAGCTGGT ATATTTTGGACCCAAAGACTTCCCTGCTTGAACCAAGGAAAGAAATGGAAAGTCTT AAAAGCCTTTCGGAATTCCTTGGCCCCAATGTGGGCTAATTGGGCTACAGGCATTCGG GGACACGCCACCCTGAGCTGAAAGGACCTGACTCTTGGTGGGCCCAAAGCGCATCT
Restriction Sites:	Please inquire
ACCN:	NM_153638
Insert Size:	2200 bp
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:	The open reading frame of this TrueClone was fully sequenced and found to be a perfect match to the protein associated to this reference.
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_153638.2</u> , <u>NP_705902.2</u>
RefSeq Size:	2280 bp
RefSeq ORF:	1713 bp
Locus ID:	80025
UniProt ID:	<u>Q9BZ23</u>
Cytogenetics:	20p13

Protein Families: Druggable Genome

Protein Pathways: Metabolic pathways, Pantothenate and CoA biosynthesis

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 (1) encodes the longest and mitochondrially localized isoform (1). 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.