

Product datasheet for **RG215676**

PANK2 (NM_153638) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	PANK2 (NM_153638) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	PANK2
Synonyms:	C20orf48; HARP; HSS; NBIA1; PKAN
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG215676 representing NM_153638
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGAGGAGGCTCGGGCCCTTCCACCCACGCGTCCATTGGCGGCGCCGCATCACTCTTCTGGGCTAC
 ACCGCCTTCTCTTCTCCGCGGAACCCGGATCCCCTCCTCCACCACCCTCTCCCCGCCCGTCACGATAG
 CCTCTCATTGGACGGAGGCACGGTCAATCCTCCTCGAGTTAGGGAGCCGACTGGACGCGAGGCCCTTTGGG
 CCGTCCCCAGCCTCGTCGGATTGGCTTCTGCGGTTGGCGCAACGGAAGAGCGGCCGGCCGAGGGCGC
 GCCTCTGCTCTGGCTGGACTGCCGCGGAGGAGCGAGAAGGAATCCGACGCTGGGGGCTTGTCTGGGCG
 GCAGCGACTGCTGCTGCGGATGGGAGGGGGCCGGCTCGGCGGCCCATGGAGCGCCACGGCAGGGCTTCC
 GCCACCTCGTCTCGTGGTGGGAGCAGGCGGGGACCCCGAAGGGCGGCCGAGGAGCCACTGC
 GGCGCCGGGCGAGCAGCGCTCGGTGCCGCGGTGGGGCTCGGCTGAGGGCACGAGGCGGGATCGACT
 GGGCTCTTACAGCGGCCCACTCGGTCTCCCGCAGCGCTCGAAAGCCTGAGGAAAAAGCGGCCGCTT
 TTCCATGGTTTGGACTGGATATCGGTGGAATCTGGTCAAGCTGGTATATTTTGAACCCAAAGACATCA
 CTGCTGAAGAAGAAGAGGAAGAAGTGGAAAGTCTTAAAAGCATTGGAAGTACCTGACCTCCAATGTGGC
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 AATCTGCACTTTATACGCTTTCCACTCATGACATGCCTGCTTTTATTCAAATGGGCAGAGATAAAAACT
 TCTCGAGTCTCCACACTGTCTTTTGGCCACTGGAGGTGGAGCGTACAAATTTGAGCAGGATTTTCTCAC
 AATAGGTGATCTTCAAGCTTTGAAAAGTGGATGAAGTACTGCTTGTGATCAAAGGAATTTTATACATTGAC
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 AGCAGTATATCCAAAGATAATTACAAACGGGTACAGGTAAGTCTTGGAGGAGGAACCTTTTTTTGGT
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 CCAAAGTGGATAAACTAGTACGAGATATTTATGGAGGGGACTATGAGAGGTTTGGACTGCCAGGCTGGC
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 AGAGCGACTTTGATCACCATCACCACAAACATTGGCTCAATAGCAAGAATGTGTGCCCTTAAAGAAAACA
 TTAACCAGGTGGTATTTGTTGAAAATTTCTTGAGAATTAACGATCGCCATGCGCTTTTGGCATATGC
 TTTGGATTATTGGTCCAAGGGGAGTTGAAAGCACTTTTTTTCGGAACACGAGGTTATTTTGGAGCTGT
 GGAGCACTCCTTGAGCTGTTGAAGATCCCG

AG**CGGACCG**ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>RG215676 representing NM_153638
 Red=Cloning site Green=Tags(s)

MRRLLGPFHPRVHWAAPPSLSSGLHRLFLRGRTRIPSSSTLSPPRHDSLSDGGTVNPPRVREPTGREAFG
 PSPASSDWLPARWRNRRGGRPRARLCSGWTAEEARRNPTLGGLLGRQRLLLRMGGGRLGAPMERHGRAS
 ATSVSSAGEQAAGDPEGRRQEPLRRRASSASVPVAVGASAEGRDRDLGSYSGPTSVSRQRVESLRKKRPL
 FPWFGLDIGGTLVKLVYFEPKDIATAEEEEVEVSLKSIKYLTSNVAYGSTGIRDVHLELKDLTLGRKG
 NLHFIRFPTHMPAFIQMGRDNFSSLHTVFCATGGGAYKFEQDFLTIGDLQLCKLDELDCIKGILYID
 SVGFNGRSQCYFENPADSEKQKLPFDLKNPYPLLLVNIIGSVSILAVYSKDNYKRVGTSLGGGTFFG
 LCCLLTGCTTFEEALEMASRGDSTKVDKLVVDIYGGDYERFGLPGWAVASSFGNMSKEKREAVSKEDLA
 RATLITITNIGSIARMCALNENINQVVFVGNFLRINTIAMRLLAYALDYWSKGQLKALFSEHEGYFGAV
 GALLELLKIP

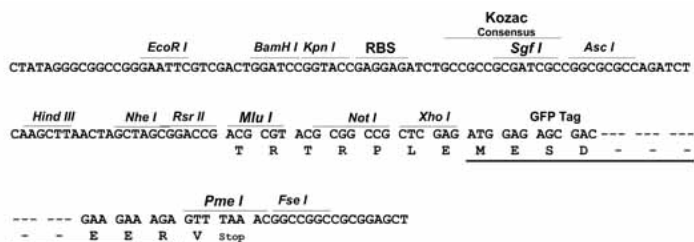
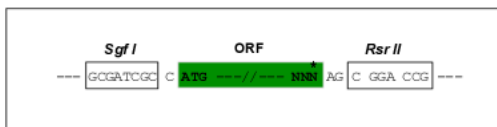
SGP**TRRRLE** - GFP Tag - V

Restriction Sites:

Sgfl-RsrII

Cloning Scheme:

Cloning sites used for ORF Shuttling:


ACCN: NM_153638

ORF Size: 1710 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_153638.3](#), [NP_705902.2](#)
RefSeq Size: 2280 bp

RefSeq ORF: 1713 bp

Locus ID: 80025

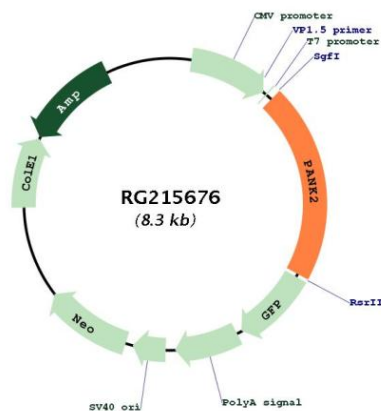
UniProt ID: [Q9BZ23](#)
Cytogenetics: 20p13

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]

Product images:



Circular map for RG215676