

Product datasheet for **RC214173**

PAK5 (NM_177990) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	PAK5 (NM_177990) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	PAK5
Synonyms:	PAK7
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide
Sequence:

>RC214173 representing NM_177990
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGTTTGGGAAGAAAAAGAAAAGATTGAAATATCTGGCCGTCCAACCTTGAACACAGGGTTCATACTG
 GGTTTGATCCACAAGAGCAGAAGTTTACCGGCCTTCCCCAGCAGTGGCACAGCCTGTTAGCAGATACGGC
 CAACAGGCCAAAGCCTATGGTGGACCTTCATGCATCACACCCATCCAGCTGGCTCCTATGAAGACAATC
 GTTAGAGGAAACAAACCTGCAAGGAAACCTCCATCAACGGCCTGCTAGAGGATTTTGACAACATCTCGG
 TGAATCGTCCAACCTCCCTAAGGAAAGAAAGCCACCCACCCAGATCAGGGAGCCTCCAGCCACGGTCC
 AGGCCACGCGGAAGAAAATGGCTTCATCACCTTCTCCAGTATCCAGCGAATCCGATACTACTGCTGAC
 TACACGACCGAAAAGTACAGGGAGAAGAGTCTCTATGGAGATGATCTGGATCCGTATTATAGAGGCAGCC
 ACGCAGCCAAGCAAAATGGGCACGTAATGAAAATGAAGCACGGGGAGGCCTACTATTCTGAGGTGAAGCC
 TTTGAAATCCGATTTTGGCAGATTTTCTGCCGATTATCACTCACATTTGGACTCACTGAGCAAACCAAGT
 GAATACAGTGACCTCAAGTGGGAGTATCAGAGAGCCTCGAGTAGCTCCCTCTGGATTATTCATTCCAAT
 TCACACCTTCTAGAACTGCAGGGACCAGCGGGTCTCCAAGGAGAGCCTGGCGTACAGTGAAGTGAATG
 GGGACCCAGCCTGGATGACTATGACAGGAGGCCAAAGTCTTCGTACCTGAATCAGACAAGCCCTCAGCCC
 ACCATGCGGCAGAGGTCCAGGTCAGGCTCGGGACTCCAGGAACCGATGATGCCATTTGGAGCAAGTGCAT
 TTTAAACCCATCCCCAAGGACACTCCTACAACCTACACCTACCTCGTTGTCCGAGCCCAATGTG
 CATTCAAAGGTGGATTACGATCGAGCACAGATGGTCTCAGCCCTCCACTGTGAGGGTCTGACACCTAC
 CCCAGGGGCCCTGCCAACTACCTCAAAGTCAAAGCAAATCGGGCTATTCTCAAGCAGTACCAGTACC
 CGTCTGGGTACCACAAAGCCACCTTGTACCATCACCCCTCCCTGCAGCAGTTCGAGTACATCTCCAC
 GGCTTCTACCTGAGCTCCCTCAGCCTCTCATCCAGCACCTACCCGCCGCCAGCTGGGGCTCCTCCTCC
 GACCAGCAGCCCTCCAGGGTGTCCCATGAACAGTTTCGGGCGGCCCTGCAGCTGGTGGTACAGCCAGGAG
 ACCCCAGGGAATACTTGGCCAACTTTATCAAAATCGGGGAAGGCTCAACCGGCATCGTATGCATCGCCAC
 CGAGAAACACACAGGAAACAAGTTGCAGTGAAGAAAATGGACCTCCGGAAGCAACAGAGACGAGAATTG
 CTTTTCAATGAGGTGATGATGCGGGATTACCACCATGACAATGTGGTTGACATGTACAACAGCTACC
 TTGTCCGGCAGTACGCTCTGGGTGGTTCATGGAGTTTCTAGAAGTGGTGCCTTGACAGACATTGTGACTCA
 CACCAGAATGAATGAAGAACAGATAGCTACTGTCTGCCTGTGAGTCTGAGAGCTCTCCTACCTTCAT
 AACCAAGGAGTGATTCACAGGGACATAAAAAGTACTCCATCCTCCTGACAAGCGATGGCCGGATAAAGT
 TGTCTGATTTTGGTTTCTGTGCTCAAGTTTCAAAGAGGTGCCGAAGAGGAAATCATTGGTTGGCACTCC
 CTAAGTGGATGGCCCTGAGGTGATTTCTAGGCTACCTTATGGGACAGAGGTGGACATCTGGTCCCTCGGG
 ATCATGGTGATAGAAATGATTGATGGCGAGCCCCCTACTTCAATGAGCCTCCCTCCAGGCGATGCGGA
 GGATCCGGGACAGTTTACCTCCAAGAGTGAAGGACCTACACAAGTTTCTCAGTGTCCGGGGATTCTT
 AGACTTGATGTTGGTGAAGGAGCCCTCTCAGAGAGCAACAGCCAGGAACTCCTCGGACATCCATTCTTA
 AAAGTACAGGTCACCGTCTTGCATCGTCCCCCTCATGAGACAATACAGGCATCAC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC214173 representing NM_177990
Red=Cloning site Green=Tags(s)

MFGKKKKKIEISGPSNFEHRVHTGFDPPQEQKFTGLPQQWHSLLADTANRPKPMVDPSCITPIQLAPMKTI
 VRGNPKCKETSINGLLEDFDNISVTRSNLSRKESPTPDQGASSHGPGHAEENGFITFSQYSSESDTTAD
 YTTEKYREKSLYGDDLDPPYRGSAAKQNGHVMKMKHGEAYYSEVKPLKSDFAFASADYHSHLDSLKPS
 EYSDLKWEYQRASSSSPLDYSFQFTPSRTAGTSGCSKESLAYSESEWGPSLDDYDRRPKSSYLNQTSQP
 TMRQRSRSGLQEPMPFGASAFKTHPQGHSYNSYTPRLSEPTMCIPKVDYDRAQMVLSPLSGSDTY
 PRGPAKLPQSQSKSGYSSSSHQYPSGYHKATLYHHPSLQSSSQYISTASYLSSLSSSTYPPPSWGSSS
 DQQPSRVSHQFRAALQLVSPGDPREYLANFIKIGEGSTGIVCIATEKHTGKQVAVKMDLRKQQRREL
 LFNEVIMRDYHHDNVDMYNSYLVGDELWVMEFLEGGALTDIVTHTRMNEEQIATVCLSVLRALSYLH
 NQGVIIHRDIKSDSILLTSDGRIKLSDFGCAQVSKEVPRKSLVGTPTYWMAPEVISRLPYGTEVDIWSLG
 IMVIEMIDGEPYPFNEPPLQAMRRIRDSLPPRVKDLHKVSSVLRGFLDLMLVREPSQRATAQELLGHPFL
 KLAGPPSCIVPLMRQYRHH

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6095_f09.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_177990

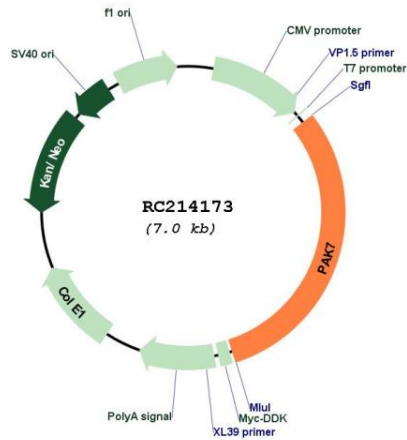
ORF Size: 2157 bp

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](#)

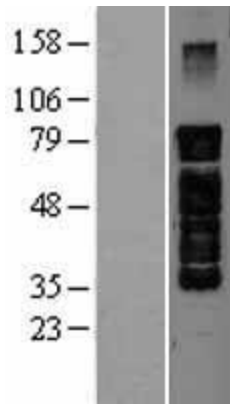
OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

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:	<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:	NM_177990.4
RefSeq Size:	4506 bp
RefSeq ORF:	2160 bp
Locus ID:	57144
UniProt ID:	Q9P286
Cytogenetics:	20p12.2
Protein Families:	Druggable Genome, Protein Kinase
Protein Pathways:	Axon guidance, ErbB signaling pathway, Focal adhesion, Regulation of actin cytoskeleton, Renal cell carcinoma, T cell receptor signaling pathway
MW:	80.6 kDa
Gene Summary:	<p>The protein encoded by this gene is a member of the PAK family of Ser/Thr protein kinases. PAK family members are known to be effectors of Rac/Cdc42 GTPases, which have been implicated in the regulation of cytoskeletal dynamics, proliferation, and cell survival signaling. This kinase contains a CDC42/Rac1 interactive binding (CRIB) motif, and has been shown to bind CDC42 in the presence of GTP. This kinase is predominantly expressed in brain. It is capable of promoting neurite outgrowth, and thus may play a role in neurite development. This kinase is associated with microtubule networks and induces microtubule stabilization. The subcellular localization of this kinase is tightly regulated during cell cycle progression. Alternatively spliced transcript variants encoding the same protein have been described. [provided by RefSeq, Jul 2008]</p>

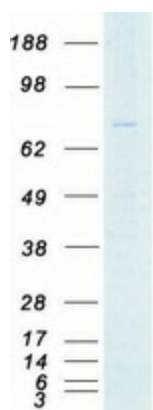
Product images:



Circular map for RC214173



Western blot validation of overexpression lysate (Cat# [LY403606]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC214173 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified PAK5 protein (Cat# [TP314173]). The protein was produced from HEK293T cells transfected with PAK5 cDNA clone (Cat# RC214173) using MegaTran 2.0 (Cat# [TT210002]).