

## Product datasheet for **RC205255**

### PAK5 (NM\_020341) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	PAK5 (NM_020341) 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:

>RC205255 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGATCGCC**

ATGTTTGGGAAGAAAAAGAAAAGATTGAAATATCTGGCCGTCCAACCTTGAACACAGGGTTCATACTG  
 GGTTTGTGCACAAGAGCAGAAGTTTACCGGCCTTCCCCAGCAGTGGCACAGCCTGTTAGCAGATACGGC  
 CAACAGGCCAAAGCCTATGGTGGACCTTCATGCATCACACCCATCCAGCTGGCTCCTATGAAGACAATC  
 GTTAGAGGAAACAAACCTGCAAGGAAACCTCCATCAACGGCCTGCTAGAGGATTTTGACAACATCTCGG  
 TGAATCGTCCAACCTCCCTAAGGAAAGAAAGCCACCCACCCAGATCAGGGAGCCTCCAGCCACGGTCC  
 AGGCCACGCGGAAGAAAATGGCTTCATCACCTTCTCCAGTATTCACGCGAATCCGATACTACTGCTGAC  
 TACACGACCGAAAAGTACAGGGAGAAGAGTCTCTATGGAGATGATCTGGATCCGTATTATAGAGGCAGCC  
 ACGCAGCCAAGCAAAATGGGCACGTAATGAAAATGAAGCACGGGGAGGCCTACTATTCTGAGGTGAAGCC  
 TTTGAAATCCGATTTTGCAGATTTTCTGCCGATTATCACTCACATTTGGACTCACTGAGCAAACCAAGT  
 GAATACAGTGACCTCAAGTGGGAGTATCAGAGAGCCTCGAGTAGCTCCCTCTGGATTATTCATTCCAAT  
 TCACACCTTCTAGAACTGCAGGGACCAGCGGGTCTCCAAGGAGAGCCTGGCGTACAGTGAAGTGAATG  
 GGGACCCAGCCTGGATGACTATGACAGGAGGCCAAAGTCTTCGTACCTGAATCAGACAAGCCCTCAGCCC  
 ACCATGCGGCAGAGGTCCAGGTCAGGCTCGGGACTCCAGGAACCGATGATGCCATTTGGAGCAAGTGCAT  
 TAAAACCCATCCCCAAGGACACTCCTACAACCTACACCTACCTCGTTGTCCGAGCCCAATGTG  
 CATTCAAAGGTGGATTACGATCGAGCACAGATGGTCTCAGCCCTCCACTGTGAGGGTCTGACACCTAC  
 CCCAGGGCCCTGCCAACTACCTCAAAGTCAAAGCAAATCGGGCTATTCTCAAGCAGTACCAGTACC  
 CGTCTGGGTACCACAAAGCCACCTTGTACCATCACCCCTCCCTGCAGAGCAGTTCCGAGTACATCTCCAC  
 GGCTTCTACCTGAGCTACCTCAGCCTCTCATCCAGCACCTACCCGCGCCAGCTGGGGCTCCTCCTCC  
 GACCAGCAGCCCTCCAGGGTGTCCCATGAACAGTTTCGGGCGGCCCTGCAGCTGGTGGTACAGCCAGGAG  
 ACCCCAGGGAATACTTGGCCAACTTTATCAAAATCGGGGAAGGCTCAACCGGCATCGTATGCATCGCCAC  
 CGAGAAACACACAGGAAACAAGTTGCAGTGAAGAAAATGGACCTCCGGAAGCAACAGAGACGAGAAGT  
 CTTTTCAATGAGGTGATGATGCGGGATTACCACCATGACAATGTGGTTGACATGTACAGCAGTACC  
 TTGTCGGCGATGAGCTCTGGGTGGTTCATGGAGTTTCTAGAAGTGGTGCCTTGACAGACATTGTGACTCA  
 CACCAGAATGAATGAAGAACAGATAGCTACTGTCTGCCTGTGAGTCTGAGAGCTCTCCTACCTTCAT  
 AACCAAGGAGTGATTCACAGGGACATAAAAAGTACTCCATCCTCCTGACAAGCGATGGCCGGATAAAGT  
 TGTCTGATTTTGGTTTCTGTGCTCAAGTTTCAAAGAGGTGCCGAAGAGGAAATCATTGGTTGGCACTCC  
 CTAAGTGGATGGCCCTGAGGTGATTTCTAGGCTACCTTATGGGACAGAGGTGGACATCTGGTCCCTCGGG  
 ATCATGGTGTAGAAATGATTGATGGCGAGCCCTCACTTCAATGAGCCTCCCTCCAGGCGATGCGGA  
 GGATCCGGGACAGTTTACCTCCAAGAGTGAAGGACCTACACAAGGTTTCTTCAAGTCTCCGGGGATTCTT  
 AGACTTGATGTTGGTGAAGGAGCCCTCTCAGAGAGCAACAGCCAGGAACCTCCGGACATCCATTCTTA  
 AACTAGCAGGTCCACCGTCTTGCAATTGCCCCCTCATGAGACAATACAGGCATCAC

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >RC205255 protein sequence  
Red=Cloning site Green=Tags(s)

MFGKKKKKIEISGSPNFEHRVHTGFDAQEQKFTGLPQQWHSLLADTANRPKPMVDPSCITPIQLAPMKTI  
 VRGNPKCKETSINGLLEDFDNISVTRSNLKRKESPTPDQGASSHGPGHAEENGFIITFSQYSSSDTTAD  
 YTTEKYREKSLYGDDLDPPYRGSAAKQNGHVMKMKHGEAYYSEVKPLKSDFAFASADYHSHLDSLKPS  
 EYSDLKWEYQRASSSSPLDYSFQFTPSRTAGTSGCSKESLAYSESEWGPSLDDYDRRPKSSYLNQTSQP  
 TMRQRSRSGSLQEPMPFGASAFKTHPQGHSYNSYTPRLSEPTMCIPKVDYDRAQMVLSPLSGSDTY  
 PRGPAKLPQSQSKSGYSSSSHQYPSGYHKATLYHHPSLQSSSQYISTASYLSYLSLSSSTYPPPSWGSS  
 DQQPSRVSHQFRAALQLVVSPGDPREYLANFIKIGEGSTGIVCIATEKHTGKQVAVKKMDLRKQQRREL  
 LFNEVIMRDYHHDNVDMYSSYLVGDELWVMEFLEGGALTDIVTHTRMNEEQIATVCLSVLRALSYLH  
 NQGVIIHRDIKSDSILLTSDGRIKLSDFGCAQVSKEVPKRKSLVGTPYWMPEVISRLPYGTEVDIWSLG  
 IMVIEMIDGEPYPFNEPPLQAMRRIRDSLPPRVKDLHKVSSVLRGFLDLMLVREPSQRATAQELLGHPFL  
 KLAGPPSCIVPLMRQYRHH

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6313\\_c01.zip](https://cdn.origene.com/chromatograms/mk6313_c01.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\_020341

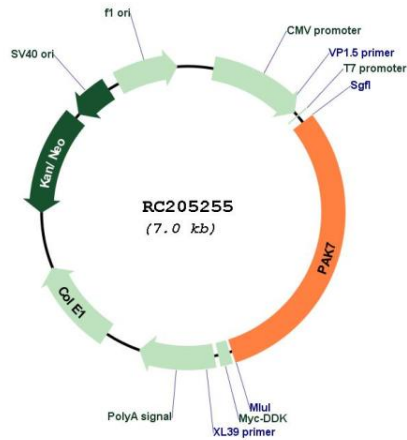
**ORF Size:** 2157 bp

**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](#)

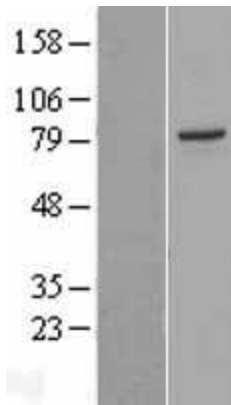
**OTI Annotation:** This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_020341.4</a>
<b>RefSeq Size:</b>	4777 bp
<b>RefSeq ORF:</b>	2160 bp
<b>Locus ID:</b>	57144
<b>UniProt ID:</b>	<a href="#">Q9P286</a>
<b>Cytogenetics:</b>	20p12.2
<b>Domains:</b>	PBD, pkinase
<b>Protein Families:</b>	Druggable Genome, Protein Kinase
<b>Protein Pathways:</b>	Axon guidance, ErbB signaling pathway, Focal adhesion, Regulation of actin cytoskeleton, Renal cell carcinoma, T cell receptor signaling pathway
<b>MW:</b>	80.8 kDa
<b>Gene Summary:</b>	<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 RC205255



Western blot validation of overexpression lysate (Cat# [LY412537]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC205255 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).