

Product datasheet for **RC217097**

PAK4 (NM_001014832) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	PAK4 (NM_001014832) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	PAK4
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



[View online »](#)

ORF Nucleotide Sequence:

>RC217097 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGTTTGGGAAGAGGAAGAAGCGGGTGGAGATCTCCGCGCGTCCAACCTCGAGCACCGGTGCACACGG
 GCTTCGACCAGCACGAGCAGAAGTTCACGGGGCTGCCCCGCCAGTGGCAGAGCCTGATCGAGGAGTCGGC
 TCGCCGGCCCAAGCCCTCGTCGACCCCGCTGCATCACCTCCATCCAGCCCGGGGCCCAAGACCATC
 GTGCGGGGCAGCAAAGGTGCCAAAGATGGGGCCCTCACGCTGCTGCTGGACGAGTTTGAACATGTCGG
 TGACACGCTCCAACCTCCCTGCGGAGAGACGCCCGCCGCCCGCCCGTCCCGCCAGGAAAATGGGAT
 GCCAGAGGAGCCGGCCACCACGGCCAGAGGGGGCCAGGGAAGGCAGGCAGCCGAGGCGGTTTCGCCGT
 CACAGCGAGGCGGGTGGCGGCAGTGGTACAGGCGACGGGCGGGCCAGAGAAGAGGCCAAAGTCTTCCA
 GGGAGGGCTCAGGGGTCCCAGGAGTCTCCCGGACAAACGCCCCCTCTCCGGCCTGATGTCGGCAC
 CCCCCAGCTGCTGGTCTGGCCAGTGGGCGAAACTGGCAGCTGGCCGGCCCTTTAACACCTACCCGAGG
 GCTGACACGGACCACCAATCCCGGGTGCACAGGGGAGCCTCATGACGTGGCCCTAACCGGCCATCAG
 CGGGGGCCTGGCCATCCCCAGTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCT
 CAGCCCTGGAGTCTGGGACCCACGCCTCAGAGCCCGAGCTGGCCCTCCAGCCTGCACCCCGCCGCC
 CCTGCTGTTCTGGGCCCCCTGGCCCCGCTCACCACAGCGGGAGCCACAGCGAGTATCCATGAGCAGT
 TCCGGGCTGCCCTGCAGCTGGTGGTGGACCCAGGCGACCCCGCTCTACCTGGACAACCTCATCAAGAT
 TGGCGAGGGCTCCACGGGCATCGTGTGCATCGCCACCGTGGCAGCTCGGGCAAGCTGGTGGCCGTCAAG
 AAGATGGACCTGCGCAAGCAGCAGAGGCGGAGCTGCTTCAACGAGGTGGTAATCATGAGGGACTACC
 AGCACGAGAATGTGGTGGAGATGTACAACAGTACCTGGTGGGGGACGAGCTCTGGTGGTCAATGGAGTT
 CCTGGAAGGAGGCGCCCTCACCACATCGTACCCACACCAAGGATGAACGAGGAGCAGATCGCGCCGTG
 TGCCCTGCAGTGTGCAGGCCCTGTCGGTGTCCACGCCAGGGCGTCATCCACCGGACATCAAGAGCG
 ACTCGATCTGCTGACCCATGATGGCAGGGTGAAGCTGTCAGACTTTGGTTCTGCGCCAGGTGAGCAA
 GGAAGTGCCCGAAGGAAGTCGCTGGTGGCAGCCCTACTGGATGGCCCGAGAGCTCATCTCCGCCTT
 CCCTACGGCCAGAGGTAGACATCTGGTGGTGGGATAATGGTATTGAGATGGTGGACGGAGAGCCCC
 CCTACTTCAACGAGCCACCCCTCAAAGCCATGAAGATGATTCGGGACAACCTGCCACCCGACTGAAGAA
 CCTGCACAAGGTGTCGCATCCCTGAAGGGCTTCTGGACCGCTGCTGGTGGCAGACCTGCCAGCGG
 GCCACGGCAGCCGAGCTGCTGAAGCACCATTCTGGCCAAGGCAGGGCCGCTGCCAGCATCGTCCCC
 TCATGCGCCAGAACCGCACCAGA

ACGCGTACGCGGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC217097 protein sequence
 Red=Cloning site Green=Tags(s)

MFGKRKRVEISAPSNFEHRVHTGFDQHEQKFTGLPRQWQSLIEESARRPKPLVDPACITSIQPGAPKTI
 VRGSKGAKD GAL TLL LDEFENMSVTRSNLRRDSPPPPARARQENGMPEEPATTARGGPGKAGSRGRFAG
 HSEAGGSGDRRRRAGPEKRPKSSREGSGGPQESSRDKRPLSGPDVGTTPQAGLASGAKLAAGRPFNTPR
 ADTDHPSRGAQGEPHDVAPNGPSAGGLAIPQSSSSSRPPTRRARGAPSPGVLGPHASEPQLAPPACTPAA
 PAVPGPPGPRSPQREPQVRSHEQFRAALQLVVDPGDPRS YL DNF IKIGEGSTGIVCIATVRSSGKLVAVK
 KMDLRKQQRRELLFNEVIMRDYQHENVEMYN SYLVGDELWVMEFLEGGALTDIVTHTRMNEEQIAAV
 CLAVLQALSVLHAQGVHRDIKSDSILLTHDGRVKLSDFGFCAQVSKEVPRRKS L VGTPTYWMAPELISRL
 PYGPEVDIWSL GIMVIEMVDGEPYPFNEPPLKAMKMIRDNLPPRLKNLHKVSPSLKGF L DRLLVRDPAQR
 ATAAELLKHPFLAKAGPPASIVPLMRQNRTR

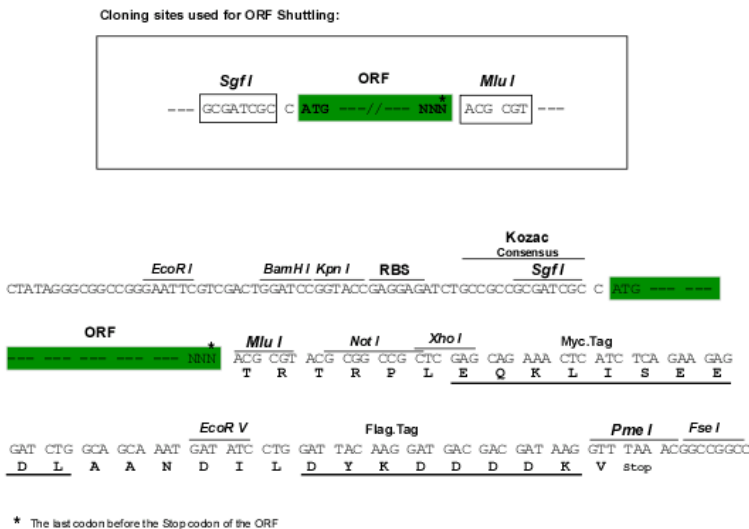
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk6564_g03.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_001014832

ORF Size: 1773 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_001014832.2](#)

RefSeq Size: 2765 bp

RefSeq ORF: 1776 bp

Locus ID: 10298

UniProt ID: [O96013](#)

Cytogenetics: 19q13.2

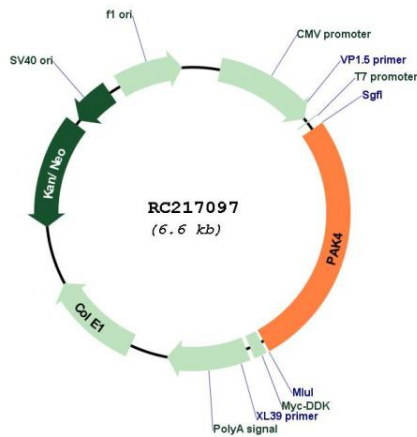
Protein Families: Druggable Genome, Protein Kinase

Protein Pathways: Axon guidance, ErbB signaling pathway, Focal adhesion, Regulation of actin cytoskeleton, Renal cell carcinoma, T cell receptor signaling pathway

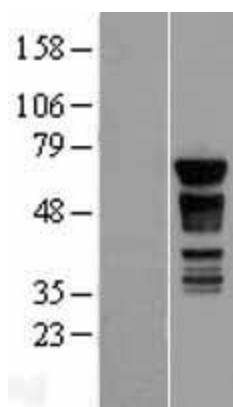
MW: 64.1 kDa

Gene Summary: PAK proteins, a family of serine/threonine p21-activating kinases, include PAK1, PAK2, PAK3 and PAK4. PAK proteins are critical effectors that link Rho GTPases to cytoskeleton reorganization and nuclear signaling. They serve as targets for the small GTP binding proteins Cdc42 and Rac and have been implicated in a wide range of biological activities. PAK4 interacts specifically with the GTP-bound form of Cdc42Hs and weakly activates the JNK family of MAP kinases. PAK4 is a mediator of filopodia formation and may play a role in the reorganization of the actin cytoskeleton. Multiple alternatively spliced transcript variants encoding distinct isoforms have been found for this gene. [provided by RefSeq, Jul 2008]

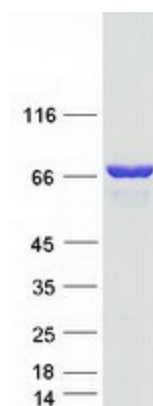
Product images:



Circular map for RC217097



Western blot validation of overexpression lysate (Cat# [LY423087]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC217097 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified PAK4 protein (Cat# [TP317097]). The protein was produced from HEK293T cells transfected with PAK4 cDNA clone (Cat# RC217097) using MegaTran 2.0 (Cat# [TT210002]).