

## Product datasheet for RC217159

### PAK4 (NM\_001014835) Human Tagged ORF Clone

#### Product data:

|                           |  |
|---------------------------|--|
| Product Type:             | Expression Plasmids  |
| Product Name:             | PAK4 (NM_001014835) Human Tagged ORF Clone                                     |
| Tag:                      | Myc-DDK  |
| Symbol:                   | PAK4   |
| Mammalian Cell Selection: | Neomycin   |
| Vector:                   | pCMV6-Entry (PS100001)   |
| E. coli Selection:        | Kanamycin (25 ug/mL)   |
| ORF Nucleotide Sequence:  | >RC217159 representing NM_001014835<br>Red=Cloning site Blue=ORF Green=Tags(s) |

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGTTTGGGAAGAGGAAGAAGCGGGTGGAGATCTCCGCGCCGTCCAACCTCGAGCACCGCGTGCACACGG  
GCTTCGACCAGCACGAGCAGAAGTTCACGGGGCTGCCCGCCAGTGCCAGAGCCTGATCGAGGAGTCGGC  
TCGCGGGCCCAAGCCCTCGTCGACCCCGCCTGCATCACCTCCATCCAGCCCGGGGCCCAAGGGGGAG  
CCTCATGACGTGGCCCTAACGGGCCATCAGCGGGGGCCTGGCCATCCCCAGTCTCTCTCTCTCTCT  
CCCGCCCTCCACCCGAGCCGAGGTGCCCCAGCCCTGGAGTGTGGACCCACGCCCTCAGAGCCCA  
GCTGGCCCTCCAGCCTGCACCCCGCCGCCCTGCTGTTCTGGGCCCTGGCCCGCTCACACAG  
CGGGAGCCACAGCGAGTATCCCATGAGCAGTTCGGGGCTGCCCTGCAGCTGGTGGTGGACCCAGGGGACC  
CCCGCTCTACCTGGACAACCTCATCAAGATTGGCGAGGGCTCCACGGGCATCGTGTGCATCGCCACCGT  
GCGCAGCTCGGGCAAGCTGGTGGCCGTCAAGAAGATGGACCTGCGCAAGCAGCAGAGGGCGGAGCTGCTC  
TTCAACGAGGTGGTAATCATGAGGGACTACCAGCACGAGAATGTGGTGGAGATGTACAACAGCTACCTGG  
TGGGGGACGAGCTCTGGGTGGTATGGAGTTCCTGGAAGGAGGCGCCCTCACCGACATCGTACCCACAC  
CAGGATGAACGAGGAGCAGATCGCGCCGTGTGCCTTGCAGTGTGCAGGCCCTGTGGTGTCCACGCC  
CAGGGCGTCATCCACGGGACATCAAGAGCGACTCGATCTGCTGACCCATGATGGCAGGGTGAAGCTGT  
CAGACTTTGGTTCTGCGCCAGGTGAGCAAGGAAGTGCCTTGCAGTGTGCAGGCCCTGTGGTGTCCACGCC  
CTGGATGGCCCCAGAGCTCATCTCCCGCTTCCCTACGGGCCAGAGGTAGACATCTGGTCTGGGGATA  
ATGGTATTGAGATGGTGGACGGAGAGCCCCCTACTTCAACGAGCCACCCCTCAAAGCCATGAAGATGA  
TTCCGGGACAACCTGCCACCCCGACTGAAGAACCTGCACAAGGTGTGCCATCCCTGAAGGGCTTCTGGG  
CCGCTGCTGGTGCAGACCCCTGCCAGCGGGCCACGGCAGCCGAGCTGTGAAGCACCCATTCTGGCC  
AAGGCAGGGCCGCTGCCAGCATCGTCCCTCATGCGCCAGAACCGCACCAGA

**ACGCGT**ACGCGGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >RC217159 representing NM\_001014835  
Red=Cloning site Green=Tags(s)

MFGKRRKRVEISAPSNFEHRVHTGFDQHEQKFTGLPRQWQSLIEESARRPKPLVDPACITSIQPGAPKGE  
 PHDVAPNGPSAGGLAIPQSSSSSRPPTRARGAPSPGVLGPHASEPQLAPPACTPAAPAVPGPPGPRSPQ  
 REPQRVSHQFRAALQLVVDPGDPPRSYLDNF IKIGEGSTGIVCIATVRSSGKLVAVKMDLRKQQRRELL  
 FNEVVIMRDYQHENVVEMYSYLVGDELWVVMFLEGGALTDIVTHTRMNEEQIAAVCLAVLQALSVLHA  
 QGVIHRDIKSDSILLTHDGRVKLSDFGCAQVSKVPRRKSIVGTPYWMAPELISRLPYGPEVDIWSLGI  
 MVIEMVDGEPYPFNEPPLKAMKIMIRDNLPPRLKNLHKVSPSLKGFDRLLVRDPAQRATAAELLKHPFLA  
 KAGPPASIVPLMRQNRTR

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk8059\\_h11.zip](https://cdn.origene.com/chromatograms/mk8059_h11.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_001014835

**ORF Size:** 1314 bp

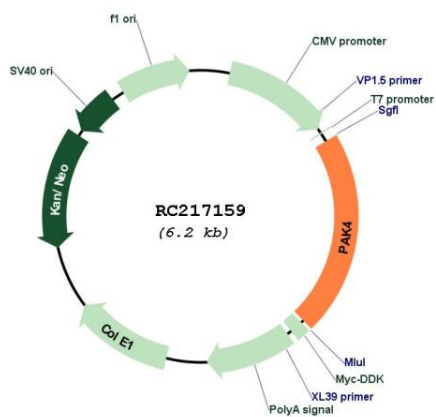
**OTI Disclaimer:** The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone 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).

|                               |   |
|-------------------------------|---|
| <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_001014835.2</a>  |
| <b>RefSeq Size:</b>           | 2379 bp   |
| <b>RefSeq ORF:</b>            | 1317 bp   |
| <b>Locus ID:</b>              | 10298   |
| <b>UniProt ID:</b>            | <a href="#">O96013</a>  |
| <b>Cytogenetics:</b>          | 19q13.2   |
| <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>                    | 48.3 kDa  |
| <b>Gene Summary:</b>          | 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 RC217159