

## Product datasheet for **RG217159**

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

#### Product data:

Product Type:	Expression Plasmids
Product Name:	PAK4 (NM_001014835) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	PAK4
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG217159 representing NM_001014835 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCCGCC**CGATCGCC**

ATGTTTGGGAAGAGGAAGAAGCGGGTGGAGATCTCCGCGCCGTCCAACCTCGAGCACCGCGTGCACACGG  
GCTTCGACCAGCACGAGCAGAAGTTCACGGGGCTGCCCGCCAGTGCCAGAGCCTGATCGAGGAGTCGGC  
TCGCCGGCCCAAGCCCTCGTCGACCCCGCCTGCATCACCTCCATCCAGCCCGGGGCCCAAGGGGAG  
CCTCATGACGTGGCCCTAACGGGCCATCAGCGGGGGCCTGGCCATCCCCAGTCTCTCTCTCTCTCT  
CCCGCCCTCCCACCCGAGCCCGAGGTGCCCCAGCCCTGGAGTGTGGACCCACGCCCTCAGAGCCCA  
GCTGGCCCTCCAGCCTGCACCCCGCCGCCCTGCTGTTCTGGGCCCTGGCCCGCTCACCCACAG  
CGGGAGCCACAGCGAGTATCCCATGAGCAGTTCGGGGCTGCCCTGCAGCTGGTGGTGGACCCAGGGGACC  
CCCGCTCTACCTGGACAACCTCATCAAGATTGGCGAGGGCTCCACGGGCATCGTGTGCATCGCCACCGT  
GCGCAGCTCGGGCAAGCTGGTGGCCGTCAAGAAGATGGACCTGCGCAAGCAGCAGAGGGCGGAGCTGCTC  
TTCAACGAGGTGGTAATCATGAGGGACTACCAGCACGAGAATGTGGTGGAGATGTACAACAGCTACCTGG  
TGGGGGACGAGCTCTGGGTGGTATGGAGTTCCTGGAAGGAGGCGCCCTCACCGACATCGTACCCACAC  
CAGGATGAACGAGGAGCAGATCGCGCCGTGTGCTTGCAGTGTGCAGGCCCTGTGGTGTCCACGCC  
CAGGGCGTCATCCACGGGACATCAAGAGCGACTCGATCTGCTGACCCATGATGGCAGGGTGAAGCTGT  
CAGACTTTGGTTCTGCGCCAGGTGAGCAAGGAAGTGCCTTGCAGTGTGCAGGCCCTGTGGTGTCCACGCC  
CTGGATGGCCCCAGAGCTCATCTCCCGCTTCCCTACGGGCCAGAGGTAGACATCTGGTCTGGGGATA  
ATGGTATTGAGATGGTGGACGGAGAGCCCTACTTCAACGAGCCACCCCTCAAAGCCATGAAGATGA  
TTCCGGGACAACCTGCCACCCCGACTGAAGAACCTGCACAAGGTGTGCCATCCCTGAAGGGCTTCTGG  
CCGCTGCTGGTGGAGACCTGCCAGCGGGCCACGGCAGCCGAGTGTGAAGCACCCATTCTGGCC  
AAGGCAGGGCCGCTGCCAGCATCGTCCCTCATGCGCCAGAACCGCACCAGA

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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**Protein Sequence:** >RG217159 representing NM\_001014835  
 Red=Cloning site Green=Tags(s)

MFGKRKRVEISAPSNFEHRVHTGFDQHEQKFTGLPRQWQSLIEESARRPKPLVDPACITSIQPGAPKGE  
 PHDVAPNGPSAGGLAIPQSSSSSRPPTRARGAPSPGVLGPHASEPQLAPPACTPAAPAVPGPPGPRSPQ  
 REPQRVSHQFRAALQLVVDPGDPPRSYLDNF IKIGEGSTGIVCIATVRSSGKLVAVKKMDLRKQQRRELL  
 FNEVVIMRDYQHENVVEMYSYLVGDELWVVMFLEGGALTDIVTHTRMNEEQIAAVCLAVLQALSVLHA  
 QGVIHRDIKSDSILLTHDGRVKLSDFGFCQVSKVEVPRRKS LVGTPYWMAPELISRLPYGPVEDIWSLGI  
 MVIEMVDGEPYPFNEPPLKAMK MIRDNLPPRLKNLHKVSPSLKGFDRLLVRDPAQRATAAELLKHPFLA  
 KAGPPASIVPLMRQNRTR

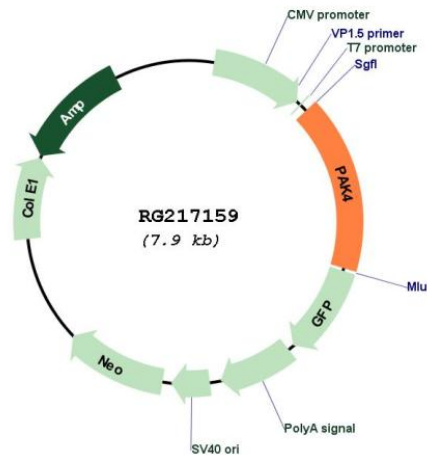
TRTRPLE - GFP Tag - V

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**Plasmid Map:**



<b>ACCN:</b>	NM_001014835
<b>ORF Size:</b>	1314 bp
<b>OTI Disclaimer:</b>	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. <a href="#">More info</a>
<b>OTI Annotation:</b>	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_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>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]