

## Product datasheet for **RG225932**

### PAK3 (NM\_001128167) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	PAK3 (NM_001128167) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	PAK3
Synonyms:	ARA; beta-PAK; bPAK; MRX30; MRX47; OPHN3; PAK-3; PAK3beta
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG225932 representing NM\_001128167  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGTCTGACGGTCTGGATAATGAAGAGAAACCCCGGCTCTCCACTGAGGATGAATAGTAAACACCGGG  
 ATTCTTCAGCACTCAACACAGCTCCAAACCACTTCCCATGGCCCTGAAGAGAAGAATAAGAAAGCCAG  
 GCTTCGCTCTATCTCCAGGAGGAGGGGATAAAACCAATAAGAAGAAGGAGAAAGAGCGCCAGAGATC  
 TCTCTTCTTCAGACTTTGAGCATAAGTTCATGTGGGTTTGTGTCAGTCACCGGGGAATTCAGTGGAA  
 TTCCAGAGCAATGGGCACGATTACTCCAACTTCCAACATAACAAAATTGGAACAGAAGAAGAACCCACA  
 AGCTGTTCTAGATGTTCTCAAATCTATGATTCCAAAGAAACAGTCAACAACCAGAAATACATGAGCTTT  
 ACATCAGGAGATAAAAGTGCACATGGATACATAGCAGCCCATCCTTCGAGTACAAAACAGCATCTGAGC  
 CTCATTGGCCCTCCTGTGTCTGAAGAAGAAGATGAAGAGGAAGAAGAAGAAGATGAAAATGAGCC  
 ACCACCAGTTATCGACCAAGACCAGAGCATACAAAATCAATCTATACTGTTCTGTGGTGAATCCATT  
 GCTTCACCAGCAGTACCAAATAAAGAGGTACACCACCCTCTGCTGAAAATGCCAATTCAGTACTTTGT  
 ACAGGAACACAGATCGGCAAAGAAAAAATCCAAGATGACAGATGAGGAGATCTTAGAGAAGCTAAGAAG  
 CATTGTGAGTGTGGGGACCCAAAGAAAAAATACACAAGATTTGAAAAATTTGGTCAAGGGGCATCAGGT  
 ACTGTTTATACAGCACTAGACATTGCAACAGGACAAGAGGTGGCCATAAAGCAGATGAACCTTCAACAGC  
 AACCCAAGAAGGAATTAATTAATGAATCTGGTTCATGAGGGAAAAAAGAACCCTAATATTGTTAA  
 TTATTTAGATAGTACTTGGTGGTGTGAACTATGGGTAGTTCATGGAATACTTGGCTGGTGGCTCTCTG  
 ACTGATGTGGTACAGAGACCTGTATGGATGAAGGACAGATAGCAGCTGTCTGCAGAGAGTGCCTGCAAG  
 CTTTGGATTTCTGCACTCAAACCAGGTATCCATAGAGATATAAAGAGTGACAATATCTCTCGGGAT  
 GGATGGCTCTGTTAAATTGACTGACTTTGGGTTCTGTGCCAGATCACTCCTGAGCAAAGTAAACGAAGC  
 ACTATGGTGGAAACCCCATATTGGATGGCACCTGAGGTGGTACTCGAAAAGCTTATGGTCCGAAAGTTG  
 ATATCTGGTCTCTTGAATTATGGCAATTGAAATGGTGGAAAGGTGAACCCCTTACCTTAATGAAAATCC  
 ACTCAGGGCATTGTATCTGATAGCCACTAATGAACTCCAGAGCTCCAGAATCCTGAGAGACTGTGAGCT  
 GTATTCGCTGACTTTTTAAATCGCTGTCTTGGATGGATGGATAGGCGAGGATCTGCCAAGGAGCTTT  
 TGCAGCATCCATTTTTAAATAGCCAAGCCTCTCCAGCCTGACTCCTGATTATCGCTGCAAAGGA  
 AGCAATTAAGAACAGCAGCCG

**ACGCGTACGCGGCCGCTCGAG** - GFP Tag - GTTTAA

**Protein Sequence:**

>RG225932 representing NM\_001128167  
 Red=Cloning site Green=Tags(s)

MSDGLDNEEKPPAPPLRMNSNDRSSALNHSSKPLPMAPEEKKNKARLRSIFPGGDKTNKKKEKERPEI  
 SLPSPDFEHTIHVGFDAVTGEFTGIPEQWARLLQTSNITKLEQKKNPQAVLDVLFYDSKETVNNQKYMSF  
 TSGDKSAHGYYAAHPSSTKTASEPPLAPPVSEEEDEEEEDENEPPPVIAAPRPEHTKSIYTRSVVESI  
 ASPAVPNKEVTPPSAENANSSTLYRNTDRQRKSKMTDEEILEKLRISIVSVDGPKKKYTRFEKIGQGASG  
 TVYTALDIATGQEVAIKQMNLLQQPKKELIINEILVMRENKNPNIVNYLDSYLVGDELWVMEYLAGGSL  
 TDVVETECMDEGQIAAVCRECLQALDFLHNSQVIHRDIKSDNILLGMDGSVKLTDFGFCAQITPEQSKRS  
 TMVGTPYWMapeVVTRKAYGPKVDIWSLGMIAIEMVEGEPYLNENPLRALYLIATNGTPELQNPERSA  
 VFRDFLNRCLMDVDRRGSakELLQHPFLKLAKPLSSLTPLIIAAKEAIKNSSR

**TRTRPLE** - GFP Tag - V

**Restriction Sites:**

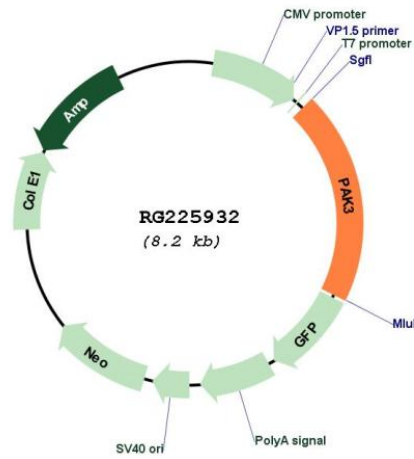
Sgfl-Mlul

Cloning Scheme:

Cloning sites used for ORF Shutting:



Plasmid Map:



<b>ACCN:</b>	NM_001128167
<b>ORF Size:</b>	1632 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_001128167.2</a>
<b>RefSeq Size:</b>	2504 bp
<b>RefSeq ORF:</b>	1635 bp
<b>Locus ID:</b>	5063
<b>UniProt ID:</b>	<a href="#">O75914</a>
<b>Cytogenetics:</b>	Xq23
<b>Protein Families:</b>	Druggable Genome, Protein Kinase, Stem cell - Pluripotency
<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>	The protein encoded by this gene is a serine-threonine kinase and forms an activated complex with GTP-bound RAS-like (P21), CDC2 and RAC1. This protein may be necessary for dendritic development and for the rapid cytoskeletal reorganization in dendritic spines associated with synaptic plasticity. Defects in this gene are the cause of a non-syndromic form of X-linked intellectual disability. Alternatively spliced transcript variants encoding different isoforms have been identified. [provided by RefSeq, Jul 2017]