

Product datasheet for **RG225980**

PAK3 (NM_001128168) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	PAK3 (NM_001128168) 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:

>RG225980 representing NM_001128168
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGTCTGACGGTCTGGATAATGAAGAGAAACCCCGGCTCCTCCACTGAGGATGAATAGTAAACACCGGG
 ATTCTTCAGCACTCAACACAGCTCCAAACCACTTCCCATGGCCCTGAAGAGAAGAATAAGAAAGCCAG
 GCTTCGCTCTATCTCCAGGAGGAGGGGATAAAACCAATAAGAAGAAGGAGAAAGAGCGCCAGAGATC
 TCTCTTCTTCAGACTTTGAGCATAAGTTCATGTGGGTTTGTGTCAGTCACCGGGGAATTCCTAACT
 CCCCTTCCAGACCTCTAGACCTGTGACGGTCGCTTCAAGTCAATCAGAGGGAAAAATGCCAGATCTCTA
 TGGCTCACAGATGTGCCAGGGAAGCTCCAGAGGGAATCCAGAGCAATGGGCACGATTACTCCAACT
 TCCAACATAACAAAATTGGAACAGAAGAAGAACCCACAAGCTGTTCTAGATGTTCTCAAATCTATGATT
 CCAAAGAAACAGTCAACAACCAGAAATACATGAGCTTTACATCAGGAGATAAAAGTGCACATGGATACAT
 AGCAGCCCATCCTTCGAGTACAAAAACAGCATCTGAGCCTCCATTGGCCCTCCTGTGTCTGAAGAAGAA
 GATGAAGAGGAAGAAGAAGAAGATGAAAATGAGCCACCAGTTATCGCACCAAGACCAGAGCATA
 CAAAATCAATCTATACTCGTTCTGTGGTTGAATCCATTGCTTCACCAGCAGTACCAAATAAAGAGGTCAC
 ACCACCCTCTGCTGAAAAATGCCAATCCAGTACTTTGTACAGGAACACAGATCGGCAAGAAAAAATCC
 AAGATGACAGATGAGGAGATCTTAGAGAAGCTAAGAAGCATTGTGAGTGTGGGGACCCAAAGAAAAAAT
 ACACAAGATTTGAAAAAATTGGTCAAGGGGCATCAGGTAAGTGTATACAGCACTAGACATTGCAACAGG
 ACAAGAGGTGGCCATAAAGCAGATGAACCTTCAACAGCAACCCAAGAAGGAATTAATTATTAATGAAAT
 CTGGCTCATGAGGGAAAAAAGAACCCTAATATTGTTAATATTTAGATAGCTACTTGGTGGGTGATGAAC
 TATGGGTAGTCATGGAATACTTGGCTGGTGGCTCTCTGACTGATGTGGTCACAGAGACCTGATGGATGA
 AGGACAGATAGCAGCTGTCTGCAGAGAGTGCCTGCAAGCTTTGGATTTCTGCACTCAAACCAGGTGATC
 CATAGAGATATAAAGAGTGACAATATTCTTCTCGGGATGGATGGCTCTGTTAAATTGACTGACTTTGGGT
 TCTGTGCCAGATCACTCCTGAGCAAAGTAAACGAAGCACTATGGTGGGAACCCCATATTGGATGGCACC
 TGAGGTGGTGAACCCCTTACCTTAATGAAAATCCACTCAGGGCATTGTATCTGATAGCCACTAATG
 GAACTCCAGAGCTCCAGAATCCTGAGAGACTGTCAGCTGTATTCCGTGACTTTTTAAATCGCTGTCTTGA
 GATGGATGTGGATAGGCGAGGATCTGCCAAGGAGCTTTTGCAGCATCCATTTTTAAATAGCCAAGCCT
 CTCTCCAGCTGACTCCTCTGATTATCGCTGCAAAGGAAGCAATTAAGAACAGCAGCCGC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>RG225980 representing NM_001128168
 Red=Cloning site Green=Tags(s)

MSDGLDNEEKPPAPPLRMNSNDRSSALNHSSKPLPMAPEEKKNKARLRSIFPGGDKTNKKKEKERPEI
 SLPDFEHTIHVGFDAVTGEFTNSPFQTSRPVTVASSQSEGKMPDLYGSQMCPGKLPPEGIPEQWARLLQT
 SNITKLEQKKNPQAVLDVLFYDSKETVNNQKYSFSTSGDKSAHGYYIAAHPSSKTASEPPLAPPVSEEE
 DEEEEEEDENEPPIAPRPEHTKSIYTRSVVESIASPAVPNKEVTPPSAENANSSTLYRNTDRQRKKS
 KMTDEEILEKLRISVSGDPKKKYTRFEKIGQASGTVYALDIATGQEVAIKQMNLLQQPKKELINEI
 LVMRENKPNINYLDSYLVGDELWVMEYLAGGSLTDVVTETCMDEGQIAAVCRECLQALDFLHNSQVI
 HRDIKSDNILLGMDGSVKLTDGFCAQITPEQSKRSTMVGTPTYWMAPEVVTRKAYGPKVDIWSLGIMAI
 MVEGEPYLNENPLRALYLIATNGTPELQNPERSAVFRDFLNRCLMDVDRRGSAKELLQHPFLKLAKP
 LSSLTPLIIAAKEAIKNSR

TRTRPLE - GFP Tag - V

Restriction Sites:

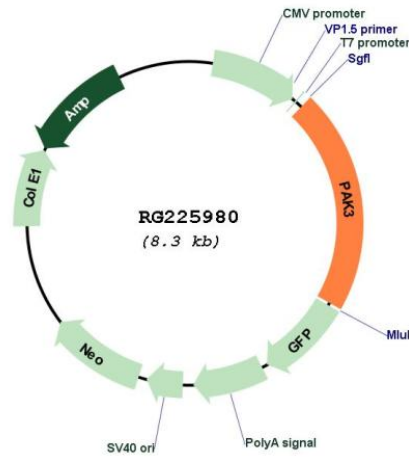
Sgfl-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



Plasmid Map:



ACCN: NM_001128168
 ORF Size: 1740 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:	<ol style="list-style-type: none">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_001128168.3
RefSeq Size:	2268 bp
RefSeq ORF:	1743 bp
Locus ID:	5063
UniProt ID:	O75914
Cytogenetics:	Xq23
Protein Families:	Druggable Genome, Protein Kinase, Stem cell - Pluripotency
Protein Pathways:	Axon guidance, ErbB signaling pathway, Focal adhesion, Regulation of actin cytoskeleton, Renal cell carcinoma, T cell receptor signaling pathway
Gene Summary:	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]