

Product datasheet for **RG222595**

PAK3 (NM_002578) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	PAK3 (NM_002578) 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:

>RG222595 representing NM_002578
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGTCTGACGGTCTGGATAATGAAGAGAAACCCCGGCTCCTCCACTGAGGATGAATAGTAAACACCGGG
 ATTCTTCAGCACTCAACACAGCTCCAAACCACTTCCCATGGCCCTGAAGAGAAGAATAAGAAAGCCAG
 GCTTCGCTCTATCTCCAGGAGGAGGGGATAAAACCAATAAGAAGAAGGAGAAAGAGCGCCAGAGATC
 TCTCTTCTTCAGACTTTGAGCATAAGTTCATGTGGGTTTGTGTCAGTCACCGGGGAATTCAGTGGAA
 TTCCAGAGCAATGGGCACGATTACTCCAACTTCCAACATAACAAAATTGGAACAGAAGAAGAACCCACA
 AGCTGTTCTAGATGTTCTCAAATCTATGATTCCAAAGAAACAGTCAACAACAGAAATACATGAGCTTT
 ACATCAGGAGATAAAAGTGCACATGGATACATAGCAGCCCATCCTCGAGTACAAAACAGCATCTGAGC
 CTCCATTGGCCCTCCTGTGTCTGAAGAAGAAGATGAAGAGGAAGAAGAAGAAGATGAAAATGAGCC
 ACCACCAGTTATCGACCAAGACCAGAGCATACAAAATCAATCTATACTGTTCTGTGGTTGAATCCATT
 GCTTCACCAGCAGTACCAAATAAAGAGGTACACCACCCTCTGCTGAAAATGCCAATTCAGTACTTTGT
 ACAGGAACACAGATCGGCAAAGAAAAAATCCAAGATGACAGATGAGGAGATCTTAGAGAAGCTAAGAAG
 CATTGTGAGTGTGGGGACCCAAAGAAAAAATACACAAGATTTGAAAAATTTGGTCAAGGGGCATCAGGT
 ACTGTTTATACAGCACTAGACATTGCAACAGGACAAGAGGTGGCCATAAAGCAGATGAACCTTCAACAGC
 AACCCAAGAAGGAATTAATTAATGAATTTCTGGTCATGAGGGAAAAAAGAACCCTAATATTGTTAA
 TTATTTAGATAGTACTTGGTGGGTGATGAACTATGGGTAGTCATGGAATACTTGGCTGGTGGCTCTCTG
 ACTGATGTGGTCACAGAGACCTGTATGGATGAAGGACAGATAGCAGCTGTCTGCAGAGAGTGCCTGCAAG
 CTTTGGATTTCTGCACTCAAACCAGGTATCCATAGAGATATAAAGAGTGACAATTTCTTCGGGAT
 GGATGGCTCTGTTAAATTGACTGACTTTGGGTTCTGTGCCAGATCACTCCTGAGCAAAGTAAACGAAGC
 ACTATGGTGGAAACCCCATATTGGATGGCACCTGAGGTGGTGACTCGAAAAGCTTATGGTCCGAAAGTTG
 ATATCTGGTCTCTTGGAAATATGGCAATTGAAATGGTGGAAAGGTGAACCCCTTACCTTAATGAAAATCC
 ACTCAGGGCATTGTATCTGATAGCCACTAATGAACTCCAGAGCTCCAGAATCCTGAGAGACTGTGAGCT
 GTATTCGCTGACTTTTTAAATCGCTGTCTTGGATGGATGGATAGGCGAGGATCTGCCAAGGAGCTTT
 TGCAGCATCCATTTTTAAATAGCCAAGCCTCTCCAGCCTGACTCCTGATTATCGCTGCAAAGGA
 AGCAATTAAGAACAGCAGCCG

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence:

>RG222595 representing NM_002578
 Red=Cloning site Green=Tags(s)

MSDGLDNEEKPPAPPLRMNSNDRSSALNHSSKPLPMAPEEKKKARLRSIFPGGDKTNKKKEKERPEI
 SLPSPDFEHTIHVGFDAVTGEFTGIPEQWARLLQTSNITKLEQKKNPQAVLDVLFKFDYDSKETVNNQKYMSF
 TSGDKSAHGYYIAAHPSSKTASEPPLAPPVSEEEDEEEEDENEPPPVIAAPRPEHTKSIYTRSVVESI
 ASPAVPNKEVTPPSAENANSSTLYRNTDRQRKSKMTDEEILEKLRISIVSVDGPKKKYTRFEKIGQGASG
 TVYTALDIATGQEVAIKQMNLLQQPKKELIINEILVMRENKNPNIVNYLDSYLVGDELWVMEYLAGGSL
 TDVVTETCMDEGQIAAVCRECLQALDFLHSNQVIHRDIKSDNILLGMDGSVKLTDFGFCAQITPEQSKRS
 TMVGTPYWMapeVVTRKAYGPKVDIWSLGMIAIEMVEGEPYLNENPLRALYLIATNGTPELQNPERSA
 VFRDFLNRCLMDVDRRGSakELLQHPFLKLAKPLSSLTPLIIAAKEAIKNSR

TRTRPLE – GFP Tag – V

Restriction Sites:

Sgfl-Mlul

Cloning Scheme:


ACCN: NM_002578

ORF Size: 1632 bp

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

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](#)

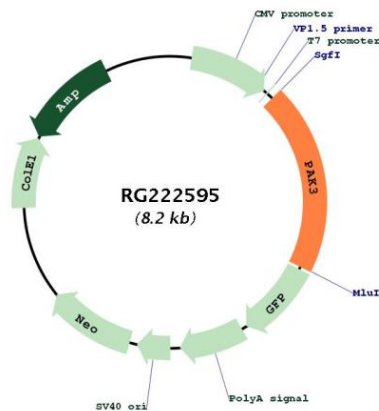
OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

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_002578.5
RefSeq Size:	2516 bp
RefSeq ORF:	1635 bp
Locus ID:	5063
UniProt ID:	O75914
Cytogenetics:	Xq23
Domains:	PBD, pkinase, TyrKc, S_TKc
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]

Product images:



Circular map for RG222595