

Product datasheet for **RG225963**

PAK3 (NM_001128172) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	PAK3 (NM_001128172) 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:

>RG225963 representing NM_001128172
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGTCTGACGGTCTGGATAATGAAGAGAAACCCCGGCTCCTCCACTGAGGATGAATAGTAAACACCGGG
 ATTCTTCAGCACTCAACACAGCTCCAAACCACTTCCCATGGCCCTGAAGAGAAGAATAAGAAAGCCAG
 GCTTCGCTCTATCTCCAGGAGGAGGGGATAAAACCAATAAGAAGAAGGAGAAAGAGCGCCAGAGATC
 TCTCTTCTTCAGACTTTGAGCATAAGTTCATGTGGGTTTGTGTCAGTCACCGGGGAATTCACAACT
 CCCCTTCCAGACCTCTAGACCTGTGACGGTCGCTTCAAGTCAATCAGAGGGAAAAATGGGAATTCAGA
 GCAATGGGCACGATTACTCCAACTTCCAACATAACAAAATTGGAACAGAAGAAGAACCCACAAGCTGTT
 CTAGATGTTCTCAAATTCATGATTCAAAGAAGAGTCAACAACAGAAATACATGAGCTTTACATCAG
 GAGATAAAGTGCACATGGATACATAGCAGCCCATCCTTCGAGTACAAAAACAGCATCTGAGCCTCCATT
 GGCCCTCCTGTGTCTGAAGAAGAAGATGAAGAGGAAGAAGAAGAAGATGAAAATGAGCCACCACCA
 GTTATCGACCAAGACCAGAGCATACAAAATCAATCTATACTCGTTCTGTGGTTGAATCCATTGCTTAC
 CAGCAGTACCAAATAAAGAGGTCACACCACCTCTGCTGAAAATGCCAATTCAGTACTTTGTACAGGAA
 CACAGATCGGCAAGAAAAAATCCAAGATGACAGATGAGGAGATCTTAGAGAAGCTAAGAAGCATTGTG
 AGTGTGGGGACCCAAAGAAAAAATACACAAGATTTGAAAAAATGGTCAAGGGGCATCAGGTAAGTGT
 ATACAGCACTAGACATTGCAACAGGACAAGAGGTGGCCATAAAGCAGATGAACCTTCAACAGCAACCCAA
 GAAGGAATTAATTATTAATGAAATTCGGTCATGAGGGAAAAAAGAACCCTAATATTGTTAATTTA
 GATAGCTACTTGGTGGGTGATGAACTATGGGTAGTCATGGAATACTTGGCTGGTGGCTCTCTGACTGATG
 TGGTCACAGAGACCTGTATGGATGAAGGACAGATAGCAGCTGTCTGCAGAGAGTGCCTGCAAGCTTTGGA
 TTTCTGCACTCAAACCAGGTGATCCATAGAGATATAAAGAGTGACAATATTCTTCTCGGATGGATGGC
 TCTGTTAAATTGACTGACTTTGGTTCTGTGCCAGATCACTCCTGAGCAAAGTAAACGAAGCACTATGG
 TGGAAACCCCATATTGGATGGCACCTGAGGTGGTACTCGAAAAGCTTATGGTCCGAAAGTTGATATCTG
 GTCTCTTGGAAATTAAGCAATTGAAATGGTGGAAAGGTGAACCCCTTACCTTAATGAAAATCCACTCAGG
 GCATTGTATCTGATAGCCACTAATGAACTCCAGAGCTCCAGAATCCTGAGAGACTGTGAGCTGTATTCC
 GTGACTTTTTAAATCGCTGTCTTGTAGATGGATGTGGATAGGCGAGGATCTGCCAAGGAGCTTTTGCAGCA
 TCCATTTTTAAAATTAGCCAAGCCTCTCTCCAGCCTGACTCCTCTGATTATCGCTGCAAAGGAAGCAATT
 AAGAACAGCAGCCGC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>RG225963 representing NM_001128172
 Red=Cloning site Green=Tags(s)

MSDGLDNEEKPPAPPLRMNSNDRSSALNHSSKPLPMAPEEKNKARLRSIFPGGDKTNKKKERPEI
 SLPDFEHTIHVGFDAVTGEFTNSPFQTSRPVTVASSQSEGKMGIPQWARLLQTSNITKLEQKKNPQAV
 LDVLKFDYSKETVNNQYMSFTSGDKSAHGYIAAHPSSKTASEPPLAPPVSEEEDEEEEDENEPPP
 VIAPRPEHTKSIYTRSVVESIASPAVPNKEVTPPSAENANSSTLYRNTDRQRKSKMTDEEILEKLRISV
 SVGDPKKKYTRFEKIGQGASGTVYALDIATGQEVAIKQMNQQQPKKELINEILVMRENKNPNVNYL
 DSYLVGDELWVMEYLAGGSLTDVVTETCMDEGQIAAVCRECLQALDFLHSNQVIHRDIKSDNILLGMDG
 SVKLTDFGFCAQITPEQSKRSTMVGTPYWMapeVVTRKAYGPKVDIWSLGIMAIEMVEGEPYLNENPLR
 ALYLIATNGTPELQNERLSAVFRDFLNRCLMDVDRRGSakELLQHPFLKLAKPLSSLTPLIIAkeAI
 KNSSR

TRTRPLE - GFP Tag - V

Restriction Sites:

SgfI-MluI

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_001128172.2
RefSeq Size:	2223 bp
RefSeq ORF:	1698 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]