

Product datasheet for **SC323605**

PAK5 (NM_177990) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	PAK5 (NM_177990) Human Untagged Clone
Tag:	Tag Free
Symbol:	PAK5
Synonyms:	PAK7
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL4</u>
E. coli Selection:	Ampicillin (100 ug/mL)



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Fully Sequenced ORF: >NCBI ORF sequence for NM_177990, the custom clone sequence may differ by one or more nucleotides

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ATGTTTGGGAAGAAAAAGAAAGATTGAAATATCTGGCCGTCCTCAACTTTGAACACAGGGTTCATACTG
GGTTTGATCCACAAGAGCAGAAGTTTACCGGCCTTCCCAGCAGTGGCACAGCCTGTTAGCAGATACGGC
CAACAGGGCAAAGCCTATGGTGGACCTTCATGCATCACACCCATCCAGCTGGCTCCTATGAAGACAATC
GTTAGAGGAAACAAACCCTGCAAGGAAACCTCCATCAACGGCCTGCTAGAGGATTTTGACAACATCTCGG
TGACTCGCTCCAACCTCCCTAAGGAAAGAAAGCCACCCACCCAGATCAGGGAGCCTCCAGCCACGGTCC
AGGCCACGCGGAAGAAAATGGCTTCATCACCTTCTCCAGTATTCAGCGAATCCGATACTACTGCTGAC
TACACGACCGAAAAGTACAGGGAGAAGAGTCTCTATGGAGATGATCTGGATCCGTATTATAGAGGACGCC
ACGCAGCCAAGCAAAATGGGCACGTAATGAAAATGAAGCACGGGGAGGCCTACTATTCTGAGGTGAAGCC
TTTGAAATCCGATTTTGCCAGATTTTCTGCCGATTATCACTCACATTTGGACTCACTGAGCAAACCAAGT
GAATACAGTGACCTCAAGTGGGAGTATCAGAGAGCCTCGAGTAGCTCCCCTCTGGATTATTCATTCCAAT
TCACACCTTCTAGAACTGCAGGGACCAGCGGGTCTCCAAGGAGAGCCTGGCGTACAGTGAAGTGAATG
GGGACCCAGCCTGGATGACTATGACAGGAGGCCAAAGTCTTCGTACCTGAATCAGACAAGCCCTCAGCCC
ACCATGCGGCAGAGGTCCAGGTCAGGCTCGGGACTCCAGGAACCGATGATGCCATTTGGAGCAAGTGCAT
TAAAAACCCATCCCAAGGACACTCCTACAACCTCTACACCTACCTCGTTGTCCGAGCCCAATGTG
CATTCCAAAGGTGGATTACGATCGAGCACAGATGGTCTCAGCCCTCCACTGTCAGGGTCTGACACCTAC
CCCAGGGGCCCTGCCAACTACCTCAAAGTCAAAGCAAATCGGGCTATTCTCAAGCAGTACCAGTACC
CGTCTGGGTACCAAAAGCCACCTTGACCATCACCCCTCCCTGCAGAGCAGTTCGCAGTACATCTCCAC
GGCTTCTACCTGAGCTCCCTCAGCCTCTCATCCAGCACCTACCCGCCGCCAGCTGGGGCTCCTCTCC
GACCCAGGGAACTCCAGGGTGTCCCATGAACAGTTTCGGGCGGCCCTGCAGCTGGTGGTCAGCCAGGAG
ACCCAGGGAATACTTGCCAACCTTATCAAAATCGGGGAAGGCTCAACCGGCATCGTATGCATCGCCAC
CGAAGAACACACAGGAAACAAGTTGCAGTGAAGAAAATGGACCTCCGGAAGCAACAGAGACGAGAAGT
CTTTTCAATGAGGTGATGATGCGGGATTACCACCATGACAATGTGGTTGACATGTACAGCAGTACC
TTGTCCGCGATGAGCTCTGGGTGGTCTAGAGTTTCTAGAAGGTGGTGCCTTGACAGACATTGTGACTCA
CACCAGAATGAATGAAGAACAGATAGCTACTGTCTGCCTGTCAGTTCTGAGAGCTCTCTCTACCTTCAT
AACCAAGGAGTGATTACAGGGACATAAAAGTGACTCCATCCTCCTGACAAGCGATGGCCGGATAAAGT
TGTCTGATTTTGGTTTCTGTGCTCAAGTTTCAAAGAGGTGCCGAAGAGGAAATCATTGGTTGGCACTCC
CTACTGGATGGCCCTGAGGTGATTTCTAGGCTACCTTATGGGACAGAGGTGGACATCTGGTCCCTCGGG
ATCATGGTGATAGAAATGATTGATGGCGAGCCCCCTACTTCAATGAGCCTCCCTCCAGGCGATGCGGA
GGATCCGGGACAGTTTACCTCCAAGAGTGAAGGACCTACACAAGGTTTCTTCAGTGTCCGGGGATTCTT
AGACTTGATGTTGGTGGGGAGCCCTCTCAGAGAGCAACAGCCAGGAACTCCTCGGACATCCATTCTTA
AACTAGCAGGTCCACCGTCTTGATCGTCCCCCTCATGAGACAATACAGGCATCACTGA
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**5' Read Nucleotide
Sequence:**

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>OriGene 5' read for mutant NM_177990 unedited
CCGCCTCGTTCCAGCAAAGGGCGGTAGGCGCTGTACGGTTGGGAGGTCTATATAAGCAGAGCTCGTTTAG
TGAACCGTCAGAAATTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGGCACAGAGGCCCTTGCC
CCTACCAGCCAGTAGTAGTTCCCCAGCGTGCGCCGGGGAGACCAGGAAACATGGCGCTGGGAGCGCTGT
AGCAGCTGAGAAGGGCTGAGGCACCGCCGCTTCGCTGACAGCCGGCCACCAGAAATACACTGTGGTGAA
ATGCTTCCACCTTGTCTAAAAATGAACACTGAAAAAAAATGAAGAAGACTGACAGCCCCACCGAAGAGT
GTGGGGGAGTAGAAATACCCCCCTCTTCTGGAGTCTTTATTTTCATCCCCGGCCATCATATAAGGGTTT
TTGCATCATGGTTGGGAAAAAAAAAAAAAAAAAATTGAATATCGGGCGCTCCAATTGAAAAAGGGTTCACTG
GGTTGTTCAAAAAACAACTTTACCAGCCCTTACAGAAATGGCCACC
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Kinase Domain Sequence:	>SC323605 kinase domain raw sequence. By performing BLASTX analysis with this sequence against NCBI reference protein database, you can confirm the presence of the kinase-deficient mutation CTTAWCAATCGGGGAGGCTACCCGGCATCGTATGCATCGCCACCGAGAAACACACAGGGAAACAAGTTGC AGTGATGAAAATGGACCTCCGGAAGCAACAGAGACGAGAATTGCTTTTCAATGAGGTCGTGATCATGCCG GATTACCACCATGACAATGTGGTTGACATGTACAACAGCTACCTTGTCGGCGATGAGCTCTGGGTGGTCA TGGAGTTTCTAGAAGGTGGTGCCTTGACAGACATTGTGACTCACA
Restriction Sites:	Please inquire
ACCN:	NM_177990
Insert Size:	4840 bp
OTI Disclaimer:	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
OTI Annotation:	This kinase-deficient mutant clone was generated by created by site-directed mutagenesis from the corresponding wild-type clone. See details in "Application of active and kinase-deficient kinome collection for identification of kinases regulating hedgehog signaling." Cell, 2008 May p536-548.
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_177990.1 , NP_817127.1
RefSeq Size:	4506 bp
RefSeq ORF:	2160 bp
Locus ID:	57144
UniProt ID:	Q9P286
Cytogenetics:	20p12.2
Protein Families:	Druggable Genome, Protein Kinase
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 member of the PAK family of Ser/Thr protein kinases. PAK family members are known to be effectors of Rac/Cdc42 GTPases, which have been implicated in the regulation of cytoskeletal dynamics, proliferation, and cell survival signaling. This kinase contains a CDC42/Rac1 interactive binding (CRIB) motif, and has been shown to bind CDC42 in the presence of GTP. This kinase is predominantly expressed in brain. It is capable of promoting neurite outgrowth, and thus may play a role in neurite development. This kinase is associated with microtubule networks and induces microtubule stabilization. The subcellular localization of this kinase is tightly regulated during cell cycle progression. Alternatively spliced transcript variants encoding the same protein have been described. [provided by RefSeq, Jul 2008]

Transcript Variant: This variant (2) lacks an internal 5' UTR exon, as compared to variant 1. Both variants encode the same protein.