

Product datasheet for **MC217513**

Pak2 (NM_177326) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Pak2 (NM_177326) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Pak2
Synonyms:	5330420P17Rik; A130002K10Rik; A1836325; D16Ertd269e; mKIAA4182; PAK-2
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



[View online »](#)

Fully Sequenced ORF: >MC217513 representing NM_177326
Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGGATCGCC**

ATGTCTGATAACGGAGAGCTAGAAGACAAGCCCCAGCACCTCCAGTTCGGATGAGCAGTACCATTTTTA
GCACCGGAGGAAAAGATCCTTTATCAGCCAATCACAGTTTGAAACCTTTGCCTTCTGTTCCAGAGGAAAA
AAAACCCAGGAACAAAATCATCTCCATATTCTCTGGCACAGAAAAAGGAAGTAAAAAGAAAAGAAAAAGAA
CGGCCAGAGATTCTCCCCATCTGATTTTGAGCACACCATCCATGTTGGCTTTGATGCTGTTACGGGAG
AGTTCACTGGCATGCCAGAACAGTGGGCGGGCTGTTGCAGACCTCCAACATTACCAAACCGAGCAGAA
GAAGAACCCTCAGGCAGTCTGGATGTCTTGAAGTTCTACGACTCCAACACTGTGAAACAGAAAGTACCTG
AGTTTCACTCCTCTGAGAAAGATGGCTTCCCTTCTGGAACACCAGCACTGAACACCAAGGGGTGAGAGA
CATCAGCTGTAGTGACAGAGGAAGATGATGATGATGAAGACGCTGCTCCTCCCGTATTGCCCTCGGCC
AGATCATACAAAATCAATTTACACACGGTCTGTATCGACCCATTCTGCTCCAGTTGGTGATTCTAAT
GTTGACAGTGGTCCAAAGTCTTCAGACAAACAGAAAAAGAAAGCCAAGATGACCGATGAAGAGATTATGG
AGAAATTAAGAACTATTGTGAGCATAGGGGACCCAAAAGAAAAATACACAAGATATGAAAAAATGGGCA
AGGGGCTTCTGGAACAGTTTTACTGCCACTGATGTGGCCTGGGGCAAGAGGTTGCTATCAAGCAGATT
AATTTACAGAAACAACCAAGAAGGAATTGATCATTAAATGAAATCTGGTATGAAAAGAGTTAAAGAATC
CCAACATAGTTAACTTCTTGGACAGTTACCTGGTAGGAGATGAGTTGTTTGGTAAATGGAGTACCTCGC
TGGTGGTCCCTCACTGATGTTGTAACAGAAACCTGCATGGACGAAGCGCAGATTGCCCGGTGTGCAGA
GAGTGTTTACAGCGTGGAGTTTTACATGCTAATCAAGTGATCCACAGAGACATCAAAGTGACAATG
TGCTTTTGGGAATGGAAGGCTCAGTTAACTTACTGACTTCGGCTTCTGTGCCAGATCACTCCTGAACA
GAGCAAACGCAGTACTATGGTTGGAACACCGTACTGGATGGACACCAGAGTGGTGACACGGAAAGCCTAT
GGTCCCAAAGTTGACATATGGTCTCTGGGCATCATGGCTATCGAGATGGTTGAAGGAGAGCTCCATACC
TCAACGAAAATCCTCTGCGGGCATTATACCTGATAGCTACAAATGGAACCTCTGAACTTCAGAAATCCAGA
AAAACCTTCCCAATATTTGGGATTTCTTAAATCGGTGTTTGGAAATGGATGTGGAGAAAAGGGTTTCG
GCCAAGGAACTGTTACAGCATCCTTCTGAAACTGGCCAAACCATTGTCTAGCTTGACGCCACTGATCC
TGGCAGCTAAAGAAGCAATGAAGAGTAACCGTAA

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-MluI

ACCN: NM_177326

Insert Size: 1575 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).

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_177326.3](#), [NP_796300.1](#)

RefSeq Size: 5741 bp

RefSeq ORF: 1575 bp

Locus ID: 224105

UniProt ID: [Q8CIN4](#)

Cytogenetics: 16 22.4 cM

Gene Summary: Serine/threonine protein kinase that plays a role in a variety of different signaling pathways including cytoskeleton regulation, cell motility, cell cycle progression, apoptosis or proliferation. Acts as downstream effector of the small GTPases CDC42 and RAC1. Activation by the binding of active CDC42 and RAC1 results in a conformational change and a subsequent autophosphorylation on several serine and/or threonine residues. Full-length PAK2 stimulates cell survival and cell growth. Phosphorylates MAPK4 and MAPK6 and activates the downstream target MAPKAPK5, a regulator of F-actin polymerization and cell migration. Phosphorylates JUN and plays an important role in EGF-induced cell proliferation. Phosphorylates many other substrates including histone H4 to promote assembly of H3.3 and H4 into nucleosomes, BAD, ribosomal protein S6, or MBP. Additionally, associates with ARHGEF7 and GIT1 to perform kinase-independent functions such as spindle orientation control during mitosis. On the other hand, apoptotic stimuli such as DNA damage lead to caspase-mediated cleavage of PAK2, generating PAK-2p34, an active p34 fragment that translocates to the nucleus and promotes cellular apoptosis involving the JNK signaling pathway. Caspase-activated PAK2 phosphorylates MKNK1 and reduces cellular translation (By similarity).[UniProtKB/Swiss-Prot Function]