

Product datasheet for **MR225428**

Pak3 (NM_008778) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Pak3 (NM_008778) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Pak3
Synonyms:	PAK-3; Pak65alpha; Pak65beta; Stk4
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



[View online »](#)

ORF Nucleotide Sequence:

>MR225428 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGTCTGACAGCTTGGATAACGAAGAAAAACCCAGCTCCCCACTGAGGATGAACAGTAAACACCGAG
 ACTCTTCAGCACTCAACACAGCTCCAAACCACTGCCCATGGCCCCGGAAGAGAAGAATAAGAAAGCCAG
 GCTTCGCTCTATCTCCAGGAGGAGGGGATAAAACCAATAAGAAGAAAGAGAAAGAGCGCCAGAGATC
 TCTCTTCCTCAGACTTTGAGCATAAGTTCATGTGGGTTTTGATGCAGTCACCGGGGAATTCAGTGGAA
 TTCCTGAGCAATGGGCACGACTACTCCAAACCTCCAACATAACAAAGCTGGAACAGAAGAAGAACCCACA
 AGCTGTTCTTGATGTTCTCAAGTCTACGACTCCAAAGAAACGGTCAACAACAGAAATATATGAGCTTT
 ACGTCAGGAGATAAAAGTCCCATGGATACATAGCAGCACATCAGTCGAATACCAAACAGCTTCGGAAC
 CTCCTTTGGCTCCTCTGTATCTGAAGAAGAGGATGAAGAAGAGGAAGAGGAAGAAGATGACAATGAACC
 TCCGCCTGTCATTGCACCAAGACCAGAGCATACAAAATCAATCTATACTCGCTCCGTGGTTGAGTCAATT
 GCTTCACCAGCTGCACCAATAAAGAAGATATCCACCTTCTGCTGAGAATGCCAATTCACCACCTTGT
 ACAGGAATACAGATCGGCAAAGAAAAAAGTCCAAGATGACGGATGAGGAGATCCTAGAGAAGCTGAGAAG
 CATTGTGAGTGTTGGGGACCCAAAGAAGAAATATACGAGATTTGAAAAATTGGCCAAGGGGCATCAGGA
 ACTGTTTACACAGCACTAGACATTGCGACTGGACAAGAGGTGGCCATAAAGCAAATGAACCTTCAACAGC
 AGCCAAAAAGGAATTAATTAATGAATCTTGTGCATGAGGGAAAAAAGAACCCTAATTTGTCAA
 TTATTTAGATAGTACTTAGTGGGTGATGAAGTGGGTAGTCAATGGAATACTTGGCTGGTGGCTCTTTG
 ACTGATGTGGTCACAGAAACCTGTATGGATGAAGGACAGATAGCAGCTGTCTGTAGAGAGTGCCTCCAAG
 CTTTGGATTTCTGCACCAACCAAGTATCCACAGAGACATAAAGAGCGACAACATTCCTCGGGAT
 GGATGGTTCTGTTAAACTGACTGATTTTGGGTTCTGTGCTCAAATCACTCCTGAGCAAAGTAAACGAAGC
 ACTATGGTGGAACTCCCTATTGGATGGCACCTGAAGTGGTAACTCGAAAAGCTTATGGTCCAAAAGTTG
 ATATCTGGTCTCTGGGAATCATGGCCATTGAAATGGTGGAAAGTGAACCCCTTACCTTAATGAAAATCC
 ACTCAGGGCCTTATCTGATAGCCACTAATGGGACCCAGAGCTCCAGAATCCTGAGAGACTGTCAGCT
 GTATTCGCTGACTTCTTAAATCGCTGTCTTGGATGGATGTGGATAGAAGAGGATCTGCTAAGGAGCTTT
 TGCAGCATCCGTTTTTAAATAGCCAAGCCTCTGTCTAGTCTCACTCCTGATTATCGCCGAAAGGA
 AGCAATTAAGAACAGTAGCCGT

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>MR225428 protein sequence
 Red=Cloning site Green=Tags(s)

MSDSLNDNEEKPPAPPLRMNSNDRSSALNHSSKPLPMAPEEKKNKARLRSIFPGGDKTNKKKEKERPEI
 SLPDFEHTIHVGFDAVTGEFTGIPEQWARLLQTSNITKLEQKKNPQAVLDVLFYDSKETVNNQKYMSF
 TSGDKSAHGYYIAAHQSNKTASEPPLAPPVSEEEDEEEEDDNEPPPVIAPRPEHTKSIYTRSVVESI
 ASPAAPNKEDIPPSAENANSTLLYRNTDRQRKSKMTDEEILEKLSIVSVGDPKKKYTRFEKIGQGASG
 TVYTALDIATGQEVAIKQMNLLQQPKKELIINEILVMRENKNPNIVNYLDSYLVGDELWVMEYLAGGSL
 TDVVTETCMDEGQIAAVCRECLQALDFLHSNQVIHRDIKSDNILLGMDGSVKLTDFGFCAQITPEQSKRS
 TMVGTPYWMPEVVTRKAYGPKVDIWSLIGMAIEMVEGEPYLNENPLRALYLIATNGTPELQNPERSA
 VFRDFLNRCLMDVDRRGSAKELLQHPFLKLAKPLSSLTPLIIAAKEAIKNSSR

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



* The last codon before the Stop codon of the ORF

ACCN: NM_008778

ORF Size: 1635 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:**
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_008778.3](#), [NP_032804.2](#)
RefSeq Size: 8225 bp

RefSeq ORF: 1635 bp

Locus ID: 18481

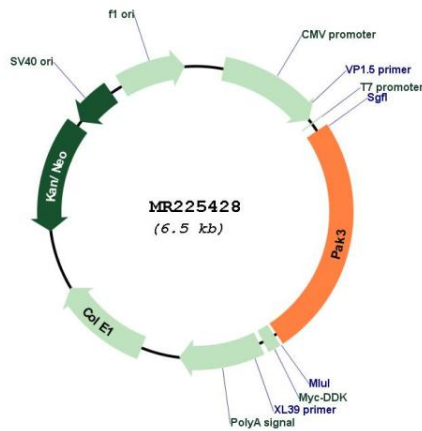
UniProt ID: [Q61036](#)

Cytogenetics: X F2

MW: 60.8 kDa

Gene Summary: Serine/threonine protein kinase that plays a role in a variety of different signaling pathways including cytoskeleton regulation, cell migration, or cell cycle regulation. Plays a role in dendrite spine morphogenesis as well as synapse formation and plasticity (PubMed:25851601). 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. Phosphorylates MAPK4 and MAPK6 and activates the downstream target MAPKAPK5, a regulator of F-actin polymerization and cell migration. Additionally, phosphorylates TNNI3/troponin I to modulate calcium sensitivity and relaxation kinetics of thin myofilaments. May also be involved in early neuronal development.[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MR225428