

Product datasheet for **MR225427**

Pak3 (NM_001195048) Mouse Tagged ORF Clone

Product data:

| | |
|--------------------|--|
| Product Type: | Expression Plasmids |
| Product Name: | Pak3 (NM_001195048) Mouse Tagged ORF Clone |
| Tag: | Myc-DDK |
| Symbol: | Pak3 |
| Synonyms: | PAK-3; Pak65alpha; Pak65beta; Stk4 |
| Vector: | pCMV6-Entry (PS100001) |
| E. coli Selection: | Kanamycin (25 ug/mL) |
| Cell Selection: | Neomycin |



[View online »](#)

ORF Nucleotide Sequence:

>MR225427 representing NM_001195048
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGTCTGACAGCTTGATAACGAAGAAAAACCCAGCTCCCCACTGAGGATGAACAGTAAACACCGAG
 ACTCTTCAGCACTCAACACAGCTCCAAACCACTGCCCATGGCCCGGAAGAGAAGAATAAGAAAGCCAG
 GCTTCGCTCTATCTCCAGGAGGAGGGGATAAAACCAATAAGAAGAAAGAGAAAGAGCGCCAGAGATC
 TCTCTTCTTCAGACTTTGAGCATAAGATTATGTGGGTTTTGATGCAGTCACCGGGGAATTCACCTCCAG
 ATCTCTATGGCTCACAGATGTGCCAGGGAAGCTCCAGAGGGAATTCCTGAGCAATGGGCAGCACTACT
 CCAAACCTCCAACATAACAAAGCTGGAACAGAAGAACCACAAGCTGTTCTTGATGTTCTCAAGTTC
 TACGACTCCAAAGAAACGGTCAACAACAGAAATATATGAGCTTACGTCAGGAGATAAAAGTGGCCATG
 GATACATAGCAGCACATCAGTCGAATACAAAACAGCTTCGGAACCTCCTTTGGCTCCTCTGTATCTGA
 AGAAGAGGATGAAGAAGAGGAAGAGGAAGAAGATGACAATGAACCTCCGCCTGTCATTGCACCAAGACCA
 GAGCATACAAAATCAATCTATACTCGCTCCGTGGTTGAGTCAATTGCTTACCAGCTGCACCAAATAAAG
 AAGATATCCACCTTCTGCTGAGAATGCCAATTCACCACTTTGTACAGGAATACAGATCGGCAAGAAA
 AAAGTCCAAGATGACGGATGAGGAGATCCTAGAGAAGCTGAGAAGCATTGTGAGTGTGGGGACCCAAAG
 AAGAAATATACGAGATTTGAAAAATTTGGCCAAGGGGCATCAGGAACGTGTTACACAGCACTAGACATTG
 CGACTGGACAAGAGGTGGCCATAAAGCAATGAACCTTCAACAGCAGCCCAAAAGGAATTAATTATTA
 TGAAATCTTGTGATGAGGGAAAATAAGAACCCTAATTTGTCAATTTAGATAGCTACTTAGTGGGT
 GATGAACGTGGGTAGTCATGGAATACTTGGCTGGTGGCTCTTTGACTGATGTGGTCACAGAAACCTGTA
 TGGATGAAGGACAGATAGCAGCTGTCTGAGAGAGTGCCTCAAGCTTTGGATTTCTTGCCTCAAAACCA
 AGTGATCCACAGAGACATAAAGAGCGACAACATTCCTCGGGATGGATGGTTCTGTAAACTGACTGAT
 TTTGGGTTCTGTGCTCAAATCACTCCTGAGCAAAGTAAACGAAGCACTATGGTGGAACTCCCTATTGGA
 TGGCACCTGAAGTGGTAACTCGAAAAGCTTATGGTCCAAAAGTTGATATCTGGTCTCTGGGAATCATGGC
 CATTGAAATGGTGAAGGTGAACCCCTTACCTTAATGAAAATCCACTCAGGGCCTTATATCTGATAGCC
 ACTAATGGGACCCAGAGCTCCAGAATCCTGAGAGACTGTCAGCTGTATCCGTGACTTCTTAAATCGCT
 GTCTTGAGATGGATGTGGATAGAAGAGGATCTGCTAAGGAGCTTTTGCAGCATCCGTTTTTAAATTAGC
 CAAGCCTCTGTCTAGTCTCACTCCTCTGATTATCGCCGAAAGGAAGCAATTAAGAACAGTAGCCGT

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>MR225427 representing NM_001195048
 Red=Cloning site Green=Tags(s)

MSDSLDNEEKPPAPPLRMNSNDRDSSALNHSSKPLPMAPEEKKNKARLRSIFPGGGDKTNKKKEKERPEI
 SLPDFEHTIHVGFDAVTGEFTPDLYGSQMCQKLEPIEQWARLLQTSNITKLEQKKNPQAVLDVLFK
 YDSKETVNNQKYSFSGDKSAHGIIAAHQSNKTASEPPLAPPVSEEEDEEEEDDNEPPPVIAPRP
 EHTKSIYTRSVVESIASPAAPNKEDIPPSAENANSTTLYRNTDRQRKSKMTDEEILEKLRISVSGDPK
 KKYTRFEKIGQGASGTVYALDIATGQVEAIKQMNLLQQQPKKELIINEILVMRENKNPNI VNYLDSYLVG
 DELWVMEYLAGGSLTDVVTETCMDEGQIAAVCRECLQALDFLHSNQVIHRDIKSDNILLGMDGSVKLTD
 FGFCAQITPEQSKRSTMVGTPTYWMAPEVVTRKAYGPKVDIWSLGMIAIEMVEGEPPLNENPLRALYLIA
 TNGTPELQNERLSAVFRDFLNRCLMDVDRRGSAKELLQHPFLKAKPLSSLTPLIIAAKEAIKNSSR

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

SgfI-MluI

| | |
|-------------------------------|--|
| ACCN: | NM_001195048 |
| ORF Size: | 1677 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: | <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_001195048.1 , NP_001181977.1 |
| RefSeq Size: | 8352 bp |
| RefSeq ORF: | 1680 bp |
| Locus ID: | 18481 |
| UniProt ID: | Q61036 |
| Cytogenetics: | X F2 |
| MW: | 62.8 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] |