OriGene Technologies, Inc.
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
https://www.origene.com
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

Product datasheet for RC210165

PAK2 (NM_002577) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	PAK2 (NM_002577) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	PAK2
Synonyms:	PAK65; PAKgamma
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

View online »

ORF Nucleotide Sequence:

>RC210165 ORF sequence, codon optimized.
Due to the complexity of NM_002577, the ORF clone is codon optimized for mammalian Expression.
The nucleotide sequence differs from the reference sequence, yet the amino acid sequence remains identical.

Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGTCCGACAACGGAGAACTGGAAGATAAACCTCCCGCCCCACCCGTTCGGATGTCTTCAACTATCTTCA
GCACCGGAGGAAAAGATCCACTCTCCGCCAATCACTCCCTGAAGCCTCTGCCGAGCGTTCCGGAGGAAAA
AAAACCTCGCCATAAAATTATTTCAATCTTTTCAGGGACAGAGAAGGGGTCCAAGAAAAAAGAAAAAGAA
AGACCCGAGATCAGTCCACCATCTGACTTCGAACACACAATCCATGTTGGATTCGACGCCGTGACGGGAG
AGTTTACTGGCATGCCAGAGCAGTGGGCGAGGCTGCTGCAAACTAGCAATATCACAAAACTCGAACAGAA
AAAGAACCCACAGGCTGTTCTTGACGTACTGAAGTTTTATGACAGTAACACAGTAAAACAAAAATACCTC
AGCTTCACCCCACCCGAAAAGGACGGATTCCCTTCAGGTACCCCCGCTTTGAATGCCAAGGGTACTGAGG
CCCCAGCTGTGGTGACCGAGGAAGAAGATGACGATGAGGAAACTGCCCCACCCGTTATCGCTCCGCGGCC
TGACCACACAAAATCTATCTACACCCGCTCAGTCATAGATCCCGTCCCAGCTCCCGTCGGTGACTCACAC
GTCGATGGCGCCGCTAAGTCCTTGGATAAGCAAAAAAAAAAAACAAAGATGACAGACGAGGAGATCATGG
AGAAGCTTCGCACCATAGTTAGTATCGGAGATCCTAAGAAGAAATATACACGCTACGAGAAGATTGGGCA
AGGCGCTTCTGGCACTGTCTTCACCGCCACCGACGTCGCTCTGGGACAAGAAGTTGCAATAAAACAAATT
AATTTGCAAAAACAACCTAAGAAGGAACTCATAATTAACGAGATCCTGGTGATGAAAGAACTTAAAAACC
CAAATATCGTCAACTTCCTCGATAGCTATCTCGTGGGTGATGAGCTTTTTGTCGTAATGGAATATCTGGC
AGGGGGCAGTCTGACGGATGTGGTGACCGAAACTTGTATGGATGAAGCCCAGATAGCTGCCGTGTGCCGC
GAGTGCTTGCAAGCCCTGGAGTTTCTGCATGCCAACCAGGTCATCCACCGAGACATTAAATCCGACAACG
TGCTGCTCGGTATGGAAGGTTCTGTAAAGTTGACTGACTTCGGCTTTTGTGCACAAATAACCCCCGAGCA
GTCTAAGCGCTCTACTATGGTTGGAACTCCTTATTGGATGGCACCAGAAGTGGTGACACGAAAGGCCTAT
GGTCCGAAGGTCGATATTTGGTCCCTCGGGATCATGGCTATAGAAATGGTAGAAGGCGAGCCACCATATC
TCAACGAGAACCCCCTGCGGGCGCTGTATCTGATCGCCACTAATGGTACACCAGAGTTGCAGAATCCTGA
AAAATTGTCCCCAATTTTCAGAGACTTTCTGAACCGCTGTCTCGAAATGGATGTGGAGAAGCGCGGTAGT
GCAAAGGAACTCTTGCAACATCCTTTTCTGAAACTGGCCAAACCCCTGTCTTCATTGACACCACTTATCA
TGGCTGCTAAGGAGGCCATGAAAAGCAATAGA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

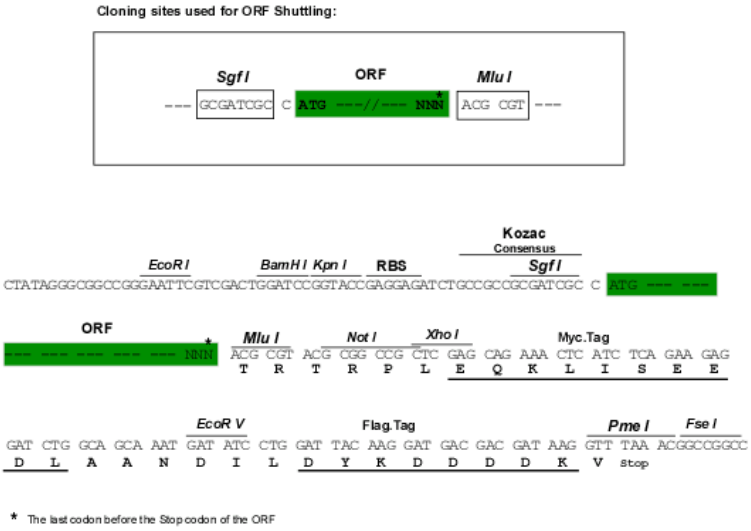
>RC210165 representing NM_002577
Red=Cloning site Green=Tags(s)

MSDNGELEDKPPAPPVRMSSTIFSTGGKDPLSANHSLKPLPSVPEEKKPRHKIISIFSGTEKGSKKKEKE
RPEISPPSDFEHTIHVGFDAVTGEFTGMPEQWARLLQTSNITKLEQKKNPQAVLDVLKFYDSNTVKQKYL
SFTPPEKDGFPSGTPALNAKGTEAPAVVTEEEDDDEETAPPVIAPRPDHTKSIYTRSVIDPVPAPVGDSH
VDGAAKSLDKQKKKTKMTDEEIMEKLRTIVSIGDPKKKYTRYEKIGQGASGTVFTATDVALGQEVAIKQI
NLQKQPKKELIINEILVMKELKNPNIVNFLDSYLVGDELFVVMEYLAGGSLTDVVTETCMDEAQIAAVCR
ECLQALEFLHANQVIHRDIKSDNVLLGMEGSVKLTDFGFCAQITPEQSKRSTMVGTPYWMAPEVVTRKAY
GPKVDIWSLGIMAIEMVEGEPPYLNENPLRALYLIATNGTPELQNPEKLSPIFRDFLNRCLEMDVEKRGS
AKELLQHPFLKLAKPLSSLTPLIMAAKEAMKSNR

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_002577

ORF Size: 1572 bp

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

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.

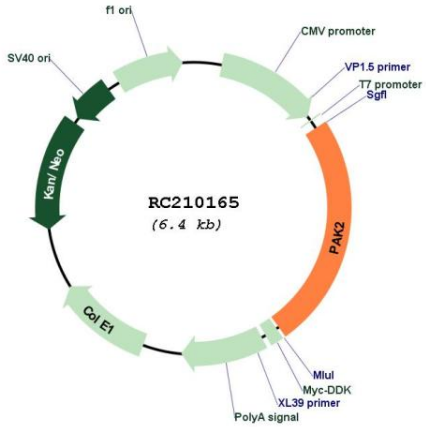
Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

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_002577.1, NM_002577.2, NM_002577.3, NM_002577.4, NP_002568.2
RefSeq Size:	6139 bp
RefSeq ORF:	1575 bp
Locus ID:	5062
UniProt ID:	Q13177
Cytogenetics:	3q29
Protein Families:	Druggable Genome, Protein Kinase
Protein Pathways:	Axon guidance, ErbB signaling pathway, Focal adhesion, MAPK signaling pathway, Regulation of actin cytoskeleton, Renal cell carcinoma, T cell receptor signaling pathway
MW:	58 kDa
Gene Summary:	The p21 activated kinases (PAK) are critical effectors that link Rho GTPases to cytoskeleton reorganization and nuclear signaling. The PAK proteins are a family of serine/threonine kinases that serve as targets for the small GTP binding proteins, CDC42 and RAC1, and have been implicated in a wide range of biological activities. The protein encoded by this gene is activated by proteolytic cleavage during caspase-mediated apoptosis, and may play a role in regulating the apoptotic events in the dying cell. [provided by RefSeq, Jul 2008]

Product images:



Circular map for RC210165