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Product datasheet for RC225947

PAK1 (NM_001128620) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	PAK1 (NM_001128620) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	PAK1
Synonyms:	alpha-PAK; IDDMSSD; p65-PAK; PAKalpha
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

View online »

ORF Nucleotide Sequence:

>RC225947 representing NM_001128620
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGTCAAATAACGGCCTAGACATTCAAGACAAACCCCCAGCCCCTCCGATGAGAAATACCAGCACTATGA
TTGGAGCCGGCAGCAAAGATGCTGGAACCCTAAACCATGGTTCTAAACCTCTGCCTCCAAACCCAGAGGA
GAAGAAAAAGAAGGACCGATTTTACCGATCCATTTTACCTGGAGATAAAACAAATAAAAAGAAAGAGAAA
GAGCGGCCAGAGATTTCTCTCCCTTCAGATTTTGAACACACAATTCATGTCGGTTTTGATGCTGTCACAG
GGGAGTTTACGGGAATGCCAGAGCAGTGGGCCCGCTTGCTTCAGACATCAAATATCACTAAGTCGGAGCA
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TGTCTGAGACTCCTGCAGTGCCACCAGTTTCAGAAGATGAGGATGATGATGATGATGATGCTACCCCACC
ACCAGTGATTGCTCCACGCCCAGAGCACACAAAATCTGTATACACACGGTCTGTGATTGAACCACTTCCT
GTCACTCCAACTCGGGACGTGGCTACATCTCCCATTTCACCTACTGAAAATAACACCACTCCACCAGATG
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CGGAGCACCATGGTAGGAACCCCATACTGGATGGCACCAGAGGTTGTGACACGAAAGGCCTATGGGCCCA
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AAACCCTCTGAGAGCCTTGTACCTCATTGCCACCAATGGGACCCCAGAACTTCAGAACCCAGAGAAGCTG
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AGCTGCTACAGGTGAGAAAACTGAGGTTTCAAGTGTTTAGTAACTTTTCCATGATAGCTGCATCAATTCC
TGAAGATTGCCAAGCCCCTCTCCAGCCTCACTCCACTGATTGCTGCAGC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC225947 representing NM_001128620
Red=Cloning site Green=Tags(s)

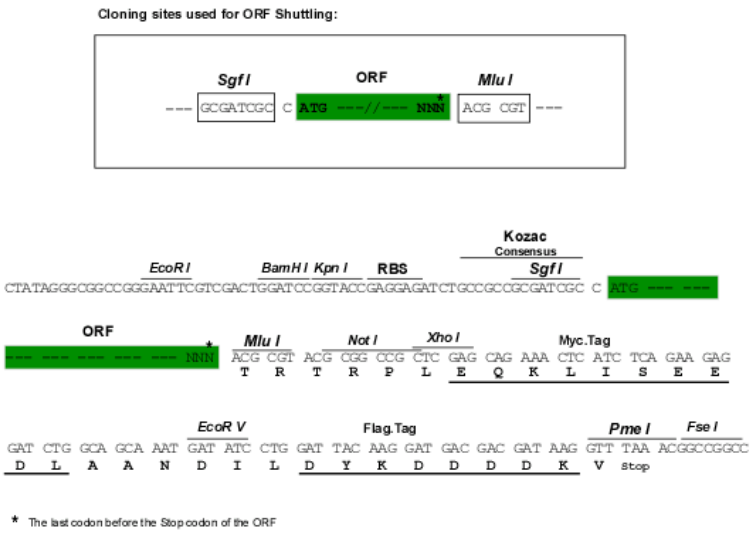
MSNNGLDIQDKPPAPPMRNTSTMIGAGSKDAGTLNHGSKPLPPNPEEKKKKDRFYRSILPGDKTNKKKEK
ERPEISLPSDFEHTIHVGFDAVTGEFTGMPEQWARLLQTSNITKSEQKKNPQAVLDVLEFYNSKKTSNSQ
KYMSFTDKSAEDYNSSNALNVKAVSETPAVPPVSEDEDDDDDDATPPPVIAPRPEHTKSVYTRSVIEPLP
VTPTRDVATSPISPTENNTTPPDALTRNTEKQKKKPKMSDEEILEKLRSIVSVGDPKKKYTRFEKIGQGA
SGTVYTAMDVATGQEVAIKQMNLQQQPKKELIINEILVMRENKNPNIVNYLDSYLVGDELWVVMEYLAGG
SLTDVVTETCMDEGQIAAVCRECLQALEFLHSNQVIHRDIKSDNILLGMDGSVKLTDFGFCAQITPEQSK
RSTMVGTPYWMAPEVVTRKAYGPKVDIWSLGIMAIEMIEGEPPYLNENPLRALYLIATNGTPELQNPEKL
SAIFRDFLNRCLEMDVEKRGSAKELLQVRKLRFQVFSNFSMIAASIPEDCQAPLQPHSTDCCS

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mg3899_g02.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_001128620

ORF Size: 1659 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

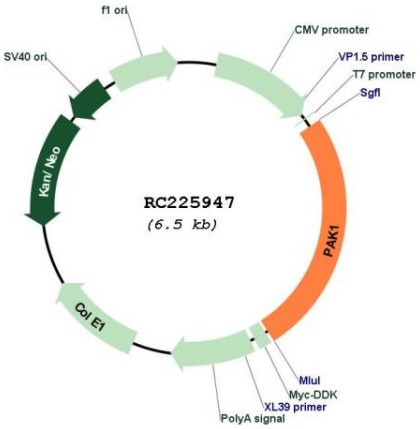
OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

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).

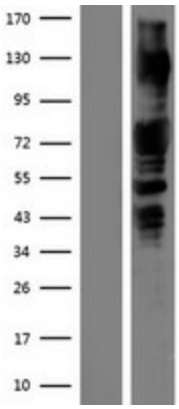
Reconstitution Method:
1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid 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.

Note:	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
RefSeq:	NM_001128620.2
RefSeq ORF:	1662 bp
Locus ID:	5058
UniProt ID:	Q13153
Cytogenetics:	11q13.5-q14.1
Protein Families:	Druggable Genome, Protein Kinase, Stem cell - Pluripotency
Protein Pathways:	Axon guidance, Chemokine signaling pathway, Epithelial cell signaling in Helicobacter pylori infection, ErbB signaling pathway, Fc gamma R-mediated phagocytosis, Focal adhesion, MAPK signaling pathway, Natural killer cell mediated cytotoxicity, Regulation of actin cytoskeleton, Renal cell carcinoma, T cell receptor signaling pathway
MW:	61.5 kDa
Gene Summary:	This gene encodes a family member of serine/threonine p21-activating kinases, known as PAK proteins. These proteins are critical effectors that link RhoGTPases to cytoskeleton reorganization and nuclear signaling, and they serve as targets for the small GTP binding proteins Cdc42 and Rac. This specific family member regulates cell motility and morphology. Mutations in this gene have been associated with macrocephaly, seizures, and speech delay. Overexpression of this gene is also reported in many cancer types, and particularly in breast cancer. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Aug 2020]

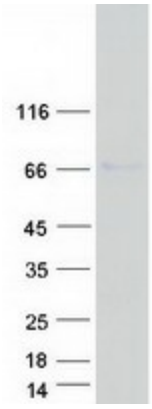
Product images:



Circular map for RC225947



Western blot validation of overexpression lysate (Cat# [LY426982]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC225947 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified PAK1 protein (Cat# [TP325947]). The protein was produced from HEK293T cells transfected with PAK1 cDNA clone (Cat# RC225947) using MegaTran 2.0 (Cat# [TT210002]).