

Product datasheet for **RC214195**

VAC14 (NM_018052) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Tag:	Myc-DDK
Symbol:	VAC14
Synonyms:	ArPIKfyve; TAX1BP2; TRX
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide
Sequence:**

>RC214195 ORF sequence

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

 TTTTGAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGC**C

 ATGAACCCCGAGAAGGATTTGCGCCGCTCAGCCTAACATCGTGCAGCCCTCAATGACAAGCTGTACG
 AAAAGCGGAAGGTGGCAGCGCTGGAGATCGAGAAGCTGGTCCGGGAGTTCGTGGCCAGAACAAATACCGT
 GCAAATCAAGCATGTGATCCAGACCCTGTCCAGGAGTTTGCCCTGTCTCAGCACCCACAGCCGGA
 GGGGCGCTCATCGGCCTGGCCGCTGCTCCATCGCACTGGGAAGGACTCAGGGCTCTACCTGAAGGAGC
 TGATCGAGCCAGTGTGACCTGCTTCAATGATGCAGACAGCAGGCTGCGTACTATGCTGCGAGGCCCT
 CTACAACATCGTCAAGGTGGCCGGGCGCTGTGCTGCCCACTTCAACGTGCTCTTTGACGGGCTGAGC
 AAGCTGGCAGCCGACCCAGACCCCAATGTGAAAAGCGGATCTGAGCTCCTAGACCGCCTTTTAAAGGACA
 TTGTGACTGAGAGCAACAAGTTTGACCTGGTGAGCTTCATCCCTTGTTCGAGAGAGGATTTACTCAA
 CAACAGTATGCCCGGCAGTTCATCATCTCTGGATCCTGGTTCTGGAGTCGGTGCCAGACATTAACTG
 CTGGATTACCTGCCGGAGATCCTGGATGGACTCTTCCAGATCCTGGGTGACAATGGCAAAGAGATTGCGA
 AAATGTGTGAGGTTGTTCTTGGAGAATTCTTAAAGAAATTAAGAAGAACCCTCCAGTGTGAAGTTTGC
 TGAGATGGCCAACATCCTGGTGATCCACTGCCAGACAACAGATGACCTCATCCAGCTGACAGCCATGTGC
 TGGATGCGGGAGTTATCCAGCTGGCGGCCGCGTCATGCTGCCTTACTCCTCCGGGATCCTGACTGCTG
 TCTTGCCCTGCTTGGCTACGATGACCGCAAGAAAAGCATCAAAGAAGTGGCAACGTGTGCAACCAGAG
 CCTGATGAAGCTGGTCACCCCGAGGACGACGAGCTGGATGAGCTGAGACCTGGGAGAGGACAGGAGAG
 CCCACCCCTGACGATGCCCTGCCAAAGCAGGAGGGCACAGCCAGTGGAGGTCCAGATGGTTCTGTGACT
 CCAGCTTCAGTAGCGGCATCAGTGTCTTCACTGCAGCCAGCACTGAAAGAGCCCCAGTGACCTTACCT
 CGACGGGATCGTGCAGGTCCTAACTGCCACCTCAGTGACACGGCCATTGGGATGATGACCAGGATTGCA
 GTTCTCAAGTGGCTCTACCACCTCTACATCAAACTCCTCGGAAGATGTTCCGGCACACGGACAGCCTCT
 TTCCATCCTACTGCAGACGTTATCGGATGAATCGGATGAGGTGATCCTGAAGGACCTGGAGGTGCTGGC
 AGAAATCGCTTCTCCCCGAGGCCAGACGGATGACCCAGGCCCTCGATGGCCCTGACCTCCAGGCC
 AGCCACTCAGAGCTCCAGGTGCCACCCCTGGCAGAGCCGGCTACTGAACACCTCTGGTACCAAAGGCT
 TAGAATGTTCTCCTTCACTCCACCATGAATTCTTACTTTTATAAGTTCATGATCAACCTTCTCAAGAG
 ATTCAGCAGCGAACGGAAGCTCCTGGAGGTGAGAGGCCCTTTCATCATCAGGCAGCTGTGCCTCCTGCTG
 AATGCGGAGAACATCTTCACTCAATGGCAGACATCCTGCTGCGGGAGGAGGACCTCAAGTTCGCCTCGA
 CCATGGTCCACGCCCTCAACACCATCCTGCTGACCTCCACAGAGCTCTTCCAGCTAAGGAACAGCTGAA
 GGACCTGAAGACCTGGAGAGCCAGAACCTGTTCTGCTGCCTGTACCGCTCCTGGTGCCACAACCCAGTC
 ACCACGGTGTCCCTCTGCTTCTCACCCAGAACTACCGGCACGCCTATGACCTCATCCAGAAGTTTGGGG
 ACCTGGAGGTACCGTGGACTTCTCGCAGAGGTGGACAAGCTGGTGCAGCTGATTGAGTGCCCCATCTT
 CACATATCTGCGCTGCAGCTGCTGGACGTGAAGAACAACCCCTACCTGATCAAGGCCCTTACGGCCTG
 CTCATGCTCCTGCCGAGAGCAGCGCTTCCAGCTGCTCTGCACCGGCTCCAGTGCGTGCCCAACCCCTG
 AGCTGCTGCAGACCGAAGACAGTCTAAAGGCAGCCCCAAGTCCAGAAAGCTGACTCCCTAGCATCGA
 CTACGCAGAGCTGCTGCAGCACTTTGAGAAGTCCAGAACAAGCACCTGGAAGTGCGGCACACGCGGAGC
 GGGCGTGGGACACCTGGACCGGAGGTTGTCCTC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC214195 protein sequence
 Red=Cloning site Green=Tags(s)

MNPEKDFAPLTPNIVRALNDKLYEKRKVAALEIEKL VREFVAQNNTVQIKHVIQTL SQEFALSQHPHSRK
 GGLIGLAACSIALGKDSGLYLKELIEPVLT CFNDADSR LRYACEALYNI VKVARGAVLPHFNVLFDGLS
 KLAADPD PNVKSGSELLDRLLKDIVTESNKFDLVSFIPLLRERIYSNNQYARQFIISWILVLESVPDINL
 LDYLP EILDGLFQILGDNGKEIRKMCEVVLGEFLKEIKKNPSSVKFAEMANILVIHCQTDDLIQLTAMC
 WMREFIQLAGRVMLPYSSGILTAVLPCLAYDDRKKS I KEVANVCNQSLMKLVTPEDDELDEL R PGQRQAE
 PTPDDALPKQEGTASGGPDGSCDSSFSSGISVFTAASTERAPVTLHLDGIVQVLNCHLSDTAIGMMTRIA
 VLKWL YHLYIKTPRKMFRHTDSLFPILLQTLSD ESDEVILKDLEVLA EIASSPAGQTDDPGPLDGPDLQA
 SHSELQVPTPGRAGLLNTSGTKGLECSPSTPTMNSYFYKFMINLLKRFSSERK LLEV RGPFIIRQLCLLL
 NAENIFHSMADILLREEDLKFASTMVHALNTILLSTELFQLRNQLKDLKTL ESQNLFCCLYRSWCHNPV
 TTVSLCFLTQNYRHAYDLIQKFGDLEVTVDFLAEVDKLVQLIECPIFTYLRLLQLDVKNNPYLIKALYGL
 LMLLPQSSAFQLLSHRLQCVNPPELLQTEDSLKAAPKSQKADSPSIDYAELLQHFEKVQNKHLEVRHQRS
 GRGDHLDRRVVL

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6688_a09.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN:	NM_018052
ORF Size:	2346 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.

Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

RefSeq: [NM_018052.5](#)

RefSeq Size: 3107 bp

RefSeq ORF: 2349 bp

Locus ID: 55697

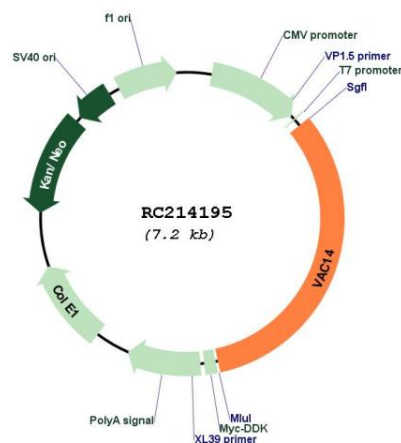
UniProt ID: [Q08AM6](#)

Cytogenetics: 16q22.1-q22.2

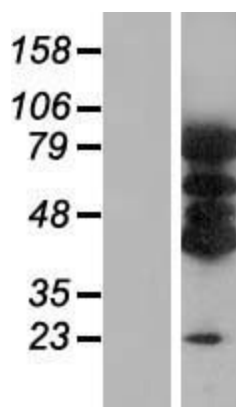
MW: 88 kDa

Gene Summary: This gene encodes a scaffold protein that is a component of the PIKfyve protein kinase complex. This complex is responsible for the synthesis of phosphatidylinositol 3,5-bisphosphate, an important component of cellular membranes, from phosphatidylinositol 3-phosphate. Mice lacking a functional copy of this gene exhibit severe neurodegeneration. Mutations in the human gene have been identified in patients with a childhood onset progressive neurological disorder characterized by impaired movement, dystonia, and striatal abnormalities. [provided by RefSeq, May 2017]

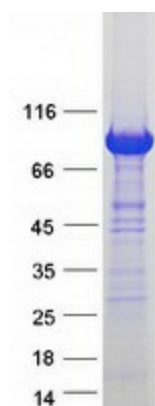
Product images:



Circular map for RC214195



Western blot validation of overexpression lysate (Cat# [LY413362]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC214195 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified VAC14 protein (Cat# [TP314195]). The protein was produced from HEK293T cells transfected with VAC14 cDNA clone (Cat# RC214195) using MegaTran 2.0 (Cat# [TT210002]).