

Product datasheet for **RC210764**

VRK1 (NM_003384) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	VRK1 (NM_003384) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	VRK1
Synonyms:	PCH1; PCH1A
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC210764 representing NM_003384 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGCCTCGTGTAAGAGCAGCTCAAGCTGGAAGACAGAGCTCTGCAAGAGACATCTTGCAGAACAATTTG
CAGTTGGAGAGATAATAACTGACATGGCAAAAAGGAATGGAAAGTAGGATTACCCATTGGCCAAGGAGG
CTTTGGCTGTATATCTTGCTGATATGAATTCCTCAGAGTCAGTTGGCAGTGATGCACCTTGTGTGTA
AAAGTGGAAACCCAGTGACAATGGACCTCTTTTACTGAATTAAGTTCTACCAACGAGCTGCAAAACCG
AGCAAATTCAGAAATGGATTTCGTACCCGTAAGCTGAAGTACCTGGGTGTTCTAAGTATTGGGGTCTGG
TCTACATGACAAAAATGAAAAAGTTACAGTTTTATGATAATGGATCGCTTTGGGAGTGACCTTCAGAAA
ATATATGAAGCAAATGCCAAAAGTTTTCTCGGAAAACCTGCTTGCAGCTAAGCTTAAGAATTCGGATA
TTCTGGAATATATTCACGAGCATGAGTATGTGCATGGAGATATCAAGGCCTCAAATCTTCTTCTGAACTA
CAAGAATCCTGACCAGGTGACTTGGTAGATTATGGCCTTGCTTATCGGTACTGCCAGAAGGAGTTCAT
AAAGAATACAAAGAAGACCCCAAAGATGTCACGATGGCACTATTGAATTCACGAGCATCGATGCACACA
ATGGCGTGGCCCATCAAGACGTGGTGATTTGAAATACTTGGTTATTGCATGATCCAATGGCTTACTGG
CCATCTTCCTTGGGAGGATAATTTGAAAGATCCTAAATATGTTAGAGATCCAAAATTAGATACAGAGAA
AATATTGCAAGTTGATGGACAAATGTTTTCTGAGAAAAACAAACAGGTGAAATGGCCAAATACATGG
AAACAGTGAAATTAAGACTACACTGAAAAACCTCTTTATGAAAAATTCGTGACATCTTTTGCAGG
ACTAAAAGCTATAGGAAGTAAGGATGATGGCAAATGGACCTCAGTGTTGTGGAGATGGAGTTTGAAA
GCAAAAACAATAACAAAGAAGCGAAAGAAAGAAATTAAGAAAGCAAGGAACCTGGTGTGAAAGATACGG
AATGGTCAAACACACAGACAGAGGAGGCCATACAGACCCGTTCAAGAACCAGAAAGAGAGTCCAGAAG

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC210764 representing NM_003384
Red=Cloning site Green=Tags(s)

MPRVKAAQAGRQSSAKRHLAEQFVGEIITDMAKKEWKVGLPIGQGGFGCIYLADMNSSESVGSDAPCVV
 KVEPSDNGPLFTELKQYRAAKPEQIQKWIRTRKLYLGVPKYWGSLHDKNGKSYRFMIMDRFGSDLQK
 IYEANAKRF SRKTVLQLSLRILDILEYIHEHEYVHGDIKASNLLLNYKNPDQVYLVDYGLAYRYCPEGVH
 KEYKEDPKRCHDGTIEFTSIDAHNGVAPSRRGDLEILGYCMIQWL TGHLPWEDNLKDPKYVRDSKIRYRE
 NIASLMDKCFPEKNKPGEIAKYMETVKLLDYTEKPL YENLRDILLQGLKAI GSKDDGKLDL SVVENGGLK
 AKTITKKRKEIEESKEPGVEDTEWSNTQTEEI QTRSRTKR RVQK

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6271_d06.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



* The last codon before the Stop codon of the ORF

ACCN: NM_003384

ORF Size: 1188 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_003384.3](#)

RefSeq Size: 1720 bp

RefSeq ORF: 1191 bp

Locus ID: 7443

UniProt ID: [Q99986](#)

Cytogenetics: 14q32.2

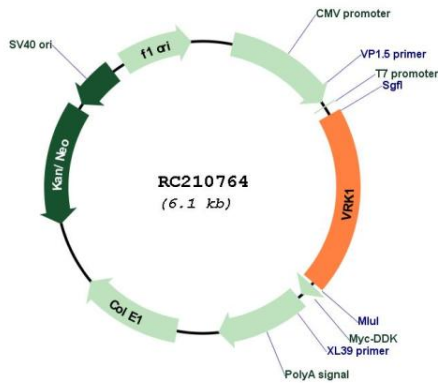
Domains: pkinase, S_TKc

Protein Families: Druggable Genome, Protein Kinase

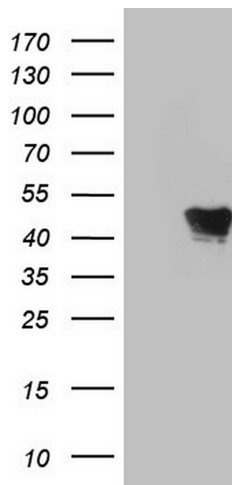
MW: 45.3 kDa

Gene Summary: This gene encodes a member of the vaccinia-related kinase (VRK) family of serine/threonine protein kinases. This gene is widely expressed in human tissues and has increased expression in actively dividing cells, such as those in testis, thymus, fetal liver, and carcinomas. Its protein localizes to the nucleus and has been shown to promote the stability and nuclear accumulation of a transcriptionally active p53 molecule and, in vitro, to phosphorylate Thr18 of p53 and reduce p53 ubiquitination. This gene, therefore, may regulate cell proliferation. This protein also phosphorylates histone, casein, and the transcription factors ATF2 (activating transcription factor 2) and c-JUN. [provided by RefSeq, Jul 2008]

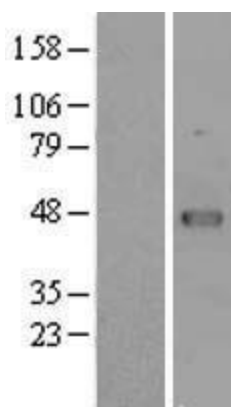
Product images:



Circular map for RC210764



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY VRK1 (Cat# RC210764, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-VRK1 (Cat# [TA805595]). Positive lysates [LY418719] (100ug) and [LC418719] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY418719]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC210764 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).