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Product datasheet for SC323490

VRK1 (NM_003384) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	VRK1 (NM_003384) Human Untagged Clone
Tag:	Tag Free
Symbol:	VRK1
Synonyms:	PCH1; PCH1A
Mammalian Cell Selection:	None
Vector:	pCMV6-XL4
E. coli Selection:	Ampicillin (100 ug/mL)

Fully Sequenced ORF:

>OriGene ORF within SC323490 sequence for NM_003384 edited (data generated by NextGen Sequencing)

ATGCCTCGTGTAAAAGCAGCTCAAGCTGGAAGACAGAGCTCTGCAAAGAGACATCTTGCA
GAACAATTTGCAGTTGGAGAGATAATAACTGACATGGCAAAAAAGGAATGGAAAGTAGGA
TTACCCATTGGCCAAGGAGGCTTTGGCTGTATATATCTTGCTGATATGAATTCTTCAGAG
TCAGTTGGCAGTGATGCACCTTGTGTTGTAATGGTGGAACCCAGTGACAATGGACCTCTT
TTTACTGAATTAAAGTTCTACCAACGAGCTGCAAAACCAGAGCAAATTCAGAAATGGATT
CGTACCCGTAAGCTGAAGTACCTGGGTGTTCCTAAGTATTGGGGGTCTGGTCTACATGAC
AAAAATGGAAAAAGTTACAGGTTTATGATAATGGATCGCTTTGGGAGTGACCTTCAGAAA
ATATATGAAGCAAATGCCAAAAGGTTTTCTCGGAAAACTGTCTTGCAGCTAAGCTTAAGA
ATTCTGGATATTCTGGAATATATTCACGAGCATGAGTATGTGCATGGAGATATCAAGGCC
TCAAATCTTCTTCTGAACTACAAGAATCCTGACCAGGTGTACTTGGTAGATTATGGCCTT
GCTTATCGGTACTGCCCAGAAGGAGTTCATAAAGAATACAAAGAAGACCCCAAAAGATGT
CACGATGGCACTATTGAATTCACGAGCATCGATGCACACAATGGCGTGGCCCCATCAAGA
CGTGGTGATTTGGAAATACTTGGTTATTGCATGATCCAATGGCTTACTGGCCATCTTCCT
TGGGAGGATAATTTGAAAGATCCTAAATATGTTAGAGATTCCAAAATTAGATACAGAGAA
AATATTGCAAGTTTGATGGACAAATGTTTTCCTGAGAAAAACAAACCAGGTGAAATTGCC
AAATACATGGAAACAGTGAAATTACTAGACTACACTGAAAAACCTCTTTATGAAAATTTA
CGTGACATTCTTTTGCAAGGACTAAAAGCTATAGGAAGTAAGGATGATGGCAAATTGGAC
CTCAGTGTTGTGGAGAATGGAGGTTTGAAAGCAAAAACAATAACAAAGAAGCGAAAGAAA
GAAATTGAAGAAAGCAAGGAACCTGGTGTTGAAGATACGGAATGGTCAAACACACAGACA
GAGGAGGCCATACAGACCCGTTCAAGAACCAGAAAGAGAGTCCAGAAGTAA

Clone variation with respect to NM_003384.2
212 a=>t;213 a=>g

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5' Read Nucleotide Sequence:

>OriGene 5' read for mutant NM_003384 unedited
ACCGCCCGTTGAGCAATGGGCGGTAGGCGTGTACGGTGGGAGGTCTATATAAGCAGAGCTCGTTTAGTGA
ACCGTCAGAATTTTGTAATACGACTCACTATAGGGCGGCCGCGAATTCGGCACGAGGCGGGAAGTTCGTA
CTGGGCAGAACGCGACGGGTCTGCGGCTTAGGTGAAAATGCCTCGTGTAAAAGCAGCTCAAGCTGGAAGA
CAGAGCTCTGCAAAGAGACATCTTGCAGAACAATTTGCAGTTGGAGAGATAATAACTGACATGGCAAAAA
AGGAATGGAAAGTAGGATTACCCATTGGCCAAGGAGGCTTTTGGCTGTATATATCTTTGCTGATATGAAT
TCTTCAGAGTCAGTTGGCAGTGATGCACCTTGTGTTGTAATGGGTGGGAACCCAGTGACAATGGACCCTC
TTTTTTACCTGATTTAAGTTTCTAACCAAACGAAGCTTGCAAAACCCAGAGAGCAAAATCAGAGAAATTG
GAATCCGTATACCCGTTAAGCTGTGAGTGTACCTGGGGTGGTTCCTATAATTTATTGGGGGTCTCTGGGT
CCTACTGTGAACAAAAAGGGGAAAAAGTTACAGGTTTTATGAATATTGGATCGCTTTGGGGAGTGACCTT
CAAAAAATATATAAGGCAAATGCAAAAGTGTTTTTCTGGGAAAACTGTCTCGCGCTAACCCTAAAAATTT
GGGAATCTGGGAATATTCCACACGAGATGTGCGCGTGGATATATAGGCTAATCTTCTGAAACTACAAACT
CACACGTGTGCTGTGATATAGGCTCTTATAGACTGCGCCAGAGGTCTAAGAATATCAAGACCCCAGAGTA
TGCAGCGCTCTTGATATTCACACGTTGCGCCATGCGGCGCTCTTACAGTGAAATGTAGAACTCGTGTAGT
ACATCGTGCTGCCCCTCTTGAGAGAAGTGAGACACAC

Kinase Domain Sequence:

>SC323490 kinase domain raw sequence. By performing BLASTX analysis with this sequence against NCBI refernce protein database, you can confirm the presence of the kinase-deficient mutation
CATGMGCAATGGGCGGTAGGCGTGTACGGTGGGAGGTCTATATAAGCAGAGCTCGTTTAGTGAACCGTCA
GAATTTTGTAATACGACTCACTATAGGGCGGCCGCGAATTCGGCACGAGGCGGGAAGTTCGTACTGGGCA
GAACGCGACGGGTCTGCGGCTTAGGTGAAAATGCCTCGTGTAAAAGCAGCTCAAGCTGGAAGACAGAGCT
CTGCAAAGAGACATCTTGCAGAACAATTTGCAGTTGGAGAGATAA

Restriction Sites: Please inquire

ACCN: NM_003384

Insert Size: 1630 bp

OTI Disclaimer: Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).

OTI Annotation: This kinase-deficient mutant clone was generated by created by site-directed mutagenesis from the corresponding wild-type clone. See details in "Application of active and kinase-deficient kinome collection for identification of kinases regulating hedgehog signaling." Cell. 2008 May p536-548.

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_003384.2, NP_003375.1

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
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]