

## Product datasheet for **RC206522**

### **VRK2 (NM\_006296) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	VRK2 (NM_006296) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	VRK2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>RC206522 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGCCACCAAAAAGAAATGAAAAATACAAACTTCTATTCCATTTCCAGAAGCAAGTTCTGGATGATA  
 TGGAAGGCAATCAGTGGGTACTGGGCAAGAAGATTGGCTCTGGAGGATTTGGATTGATATTTAGCTTT  
 CCCACAAATAAACCCAGAGAAAGATGCAAGACATGTAGTAAAAGTGAATATCAAGAAAAATGGCCCGTTA  
 TTTTCAGAACTTAAATTTTATCAGAGAGTTGCAAAAAAGACTGTATCAAAAAGTGGATAGAACGCAAAAC  
 AACTTGATTATTTAGGAATTCCTCTGTTTTATGGATCTGGTCTGACTGAATTCAGGGAAGAAGTTACAG  
 ATTTATGGTAATGGAAAGACTAGGAATAGATTTACAGAAGATCTCAGGCCAGAATGGTACCTTTAAAAAG  
 TCAACTGCTCCTGCAATTAGGTATCCGAATGTTGGATGTACTGGAATATATACATGAAAATGAATATGTTT  
 ATGGTGATGTAAGCAGCAAACTACTTTTGGGTTACAAAAATCCAGACCAGGTTTATCTTGCAGATTA  
 TGGACTTCTACAGATATTGTCCAATGGGAACCACAAACAGTATCAGGAAAATCTAGAAAAGGCCAT  
 AATGGGACAATAGAGTTTACCAGCTTGGATGCCCAAGGGAGTAGCCTTGTCCAGACGAAGTGACGTTG  
 AGATCCTCGGCTACTGCATGCTGCGGTGTTGTGTGGGAAACTTCCCTGGGAACAGAACCTGAAGGACCC  
 TGTGGCTGTGCAGACTGCTAAAACAAATCTGTTGGACGAGCTCCCCAGTCAGTGCTTAAATGGGCTCCT  
 TCTGGAAGCAGTTGCTGTGAAATAGCCCAATTTTGGTATGTGCTCATAGTTTAGCATATGATGAAAAGC  
 CAAACTATCAAGCCCTCAAGAAAATTTGAACCCTCATGGAATACCTTTAGGACCACTGGACTTTTCCAC  
 AAAAGGACAGAGTATAAATGTCCATACTCCAAACAGTCAAAAAGTTGATTCACAAAAGGCTGCAACAAAG  
 CAAGTCAACAAGGCACACAATAGGTTAATCGAAAAAAAAGTCCACAGTGAGAGAAGCGCTGAGTCTGTG  
 CAACATGGAAAGTGCAGAAAGAGGAGAACTGATTGGATTGATGAACAATGAAGCAGCTCAGGAAAGCAC  
 AAGGAGAAGACAGAAAATATCAAGAGTCTCAAGAACCTTTGAATGAAGTAAACAGTTTCCACAAAAAATC  
 AGCTATACACAATTTCCAAACTCATTTTATGAGCCTCATCAAGATTTTACCAGTCCAGATATATTTCAAGA  
 AGTCAAGATCTCCATCTTGGTATAAATACACTTCCACAGTCAGCACGGGGATCACAGACTTAGAAAAGTTC  
 AACTGGACTTTGGCCTACAATTTCCAGTTTACTCTTAGTGAAGAGACAAACGCAGATGTTTATTATTAT  
 CGCATCATACCTGCTCTTTGATGTTAGTATTTCTTGCTTTATTTTTTCTC

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC206522 protein sequence  
 Red=Cloning site Green=Tags(s)

MPPKRNEKYKLPPIPFPEGKVLDDMEGNQWVLGKKIGSGGFGLIYLAFPTNKPEKDARHVVKVEYQENGL  
 FSELKFYQRVAKKDCIKKWIERNQLDYLGIPLFYGSLTEFKGRSYRFMVMERLIDLQKISGQNGTFKK  
 STVLQLGIRMLDVLEYIHENEYVHGDVKAANLLLYKNPDQVYLADYGLSYRYCPNGNHKQYQENPRKGH  
 NGTIEFTSLDAHKGVALSRRSDVEILGYCMLRWLGGKLPWEQNLKDPVAVQTAKTNLLDELQSVLKWAP  
 SGSSCCEIAQFLVCAHSLAYDEKPNYQALKILNPHGIPGLDFSTKGQSINVHTPNSQKVDSDKAATK  
 QVNKAHNRLIEKKVHSERSAESCATWKVQKEELIGLMNNEAAQESTRRRQKYQESQEPLNEVNSFPQKI  
 SYTQFPNSFYEPHQDFTSPDIFKKSRSWYKYTSTVSTGITDLESSTGLWPTISQFTLSEETNADVYYY  
 RIIIPVLLMLVFLALFFL

**TR**TRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mk6232\\_a07.zip](https://cdn.origene.com/chromatograms/mk6232_a07.zip)

**Restriction Sites:**

Sgfl-MluI

**Cloning Scheme:**


**ACCN:** NM\_006296

**ORF Size:** 1524 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\\_006296.2](#)

**RefSeq Size:** 1986 bp

**RefSeq ORF:** 1527 bp

**Locus ID:** 7444

**UniProt ID:** [Q86Y07](#)

**Cytogenetics:** 2p16.1

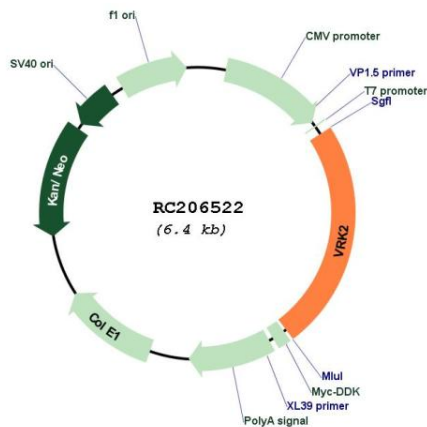
**Domains:** pkinase, S\_TKc

**Protein Families:** Druggable Genome, Protein Kinase, Transmembrane

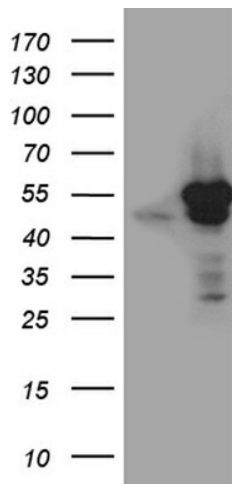
**MW:** 58.1 kDa

**Gene Summary:** This gene encodes a member of the vaccinia-related kinase (VRK) family of serine/threonine protein kinases. The encoded protein acts as an effector of signaling pathways that regulate apoptosis and tumor cell growth. Variants in this gene have been associated with schizophrenia. Alternative splicing results in multiple transcript variants that differ in their subcellular localization and biological activity. [provided by RefSeq, Jan 2014]

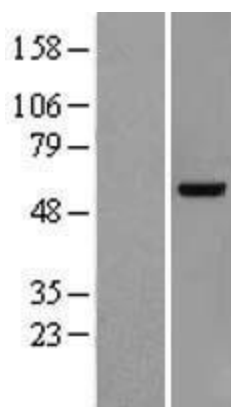
**Product images:**



Circular map for RC206522



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY VRK2 (Cat# RC206522, 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-VRK2 (Cat# [TA811397])(1:2000). Positive lysates [LY416739] (100ug) and [LC416739] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY427219]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with [RC225875] using transfection reagent MegaTran 2.0 (Cat# [TT210002]).