

Product datasheet for **RC203352**

PLK3 (NM_004073) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	PLK3 (NM_004073) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	PLK3
Synonyms:	CNK; FNK; PLK-3; PRK
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide
Sequence:**

>RC203352 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGAGCCTGCCCGGTTTCCTGTCTCCGCGCCCTTCCAGCGTGGCGCCGCCGCGCCGCTCCCCGG
 CCGGGCCCGGGCCGCTCCGAGTGCCTTGC GCGGACCTGAGCTGGAGATGCTGGCCGGGCTACCGACGTC
 AGACCCCGGGCGCCTCATCACGGACCCGCGCAGCGCCGCACCTACCTCAAAGGCCGCTTGTGGGCAAG
 GGGGGTTCGCCCGCTGTACGAGGCCACTGACACAGAGACTGGCAGCGCCTACGCTGTCAAAGTCATCC
 CGCAGAGCCGCTCGCAAGCCGCATCAGCGGAGAAGATCCTAAATGAGATTGAGCTGCACCGAGACCT
 GCAGCACCCACATCGTGCCTTTTCGCACCACTTTGAGGACGCTGACAAATCTACATTTTCTGGAG
 CTCTGCAGCCGAAAGTCCCTGGCCACATCTGGAAGGCCCGCACACCCTGTTGGAGCCAGAAGTGCCT
 ACTACCTGCGGCAGATCCTTTCTGGCCTCAAGTACTTGCACCAGCGCGCATCTTGACCCGGACCTCAA
 GTTGGGAAATTTTTCATCACTGAGAACATGGAAGTGAAGGTGGGGGATTTGGGCTGGCAGCCCGTTG
 GAGCCTCCGAGCAGAGGAAGAAGACCATCTGTGGCACCCCAACTATGTGGCTCCAGAAGTGTCTGA
 GACAGGGCCACGGCCCTGAGGCGGATGTATGGTCACTGGGCTGTGTATGTACACGCTGCTGCGGGAG
 CCCTCCCTTTGAGACGGCTGACCTGAAGGAGACGTACCGCTGCATCAAGCAGGTTCACTACACGCTGCCT
 GCCAGCCTCTCACTGCCTGCCCGCAGCTCCTGGCCGCCATCCTTGGGCTCACCCGAGACCGCCCT
 CTATTGACCAGATCCTGCGCCATGACTTCTTTACCAAGGGCTACACCCCGATCGACTCCCTATCAGCAG
 CTGCGTGACAGTCCCAGACCTGACACCCCAACCCAGCTAGGAGTCTGTTGCAAAGTTACCAAGAGC
 GCCTTGGCAGAAAGAAGAAGAGTAAGAATCATGCCAGGAGAGGGATGAGGTCTCCGGTTTGGTGAGCG
 CCTCATGCGCACATCCGTTGGCCATCAGGATGCCAGGCCAGAGGCTCCAGCAGTCTTGCCAGCCCG
 TGTGAGCCTGGTAGAGACAGCACCTGAAGACAGCTCACCCCGTGGGACACTGGCAAGCAGTGGAGATGGA
 TTTGAAGAAGGTCTGACTGTGGCCACAGTAGTGGAGTCAGCCCTTTGTGCTCTGAGAAATTGTATAGCCT
 TCATGCCCCAGCGGAACAGAACCAGCCCGCCCTGGCCAGCCAGAGCCTCTGGTGTGGGTGAGCAAGTG
 GGTTGACTACTCCAATAAGTTCCGGCTTTGGGTATCAACTGTCCAGCCCGCGTGTGGCTGTGCTCTTCAAC
 AATGGCACACATATGGCCCTGTCCGGCAACAGAAAGACTGTGCACTACAATCCCACCAGCACAAAGCACT
 TCTCCTTCTCCGTGGGTGCTGTGCCCGGGCCCTGCAGCCTCAGCTGGGTATCCTGCGGTACTTCGCCTC
 CTACATGGAGCAGCACCTCATGAAGGTGGAGATCTGCCAGTGTGGAAGAGGTAGAGGTACCTGCTCCG
 CCCTTGTGCTGCAGTGGTCAAGACGGATCAGGCTCTCCTCATGCTGTTTGTAGTATGGCACTGTCCAGG
 TGAATTTCTACGGGGACCACACCAAGCTGATTCTCAGTGGCTGGGAGCCCTCCTTGTGACTTTTGTGGC
 CCGAAATCGTAGTGTGTTGACTTACCTCGCTTCCACCTTCGGCAGCTGGGCTGCTCTCCAGACCTGCGG
 CAGCGACTCCGCTATGCTCTGCGCTGCTCCGGGACCGCAGCCAGCC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC203352 protein sequence
 Red=Cloning site Green=Tags(s)

MEPAAGFLSPRPFQRAAAPAPPAGPGPPPSALRGPELEMLAGLPTSDPGRLITDPRSGRTYLKGRLLGK
 GGFARCYEATDTETGSAYAVKVIPQSRVAKPHQREKILNEIELHRDLQHRHIVRFSHHFEDADNIYIFLE
 LCSRKSLAHIWKARHTLLEPEVRYLRQILSGLKYLHQRGILHRDLKLGFFITENMELKVGDFGLAARL
 EPPEQRKKTICGTPNYVAPEVLLRQGHGPEADVWSLGCVMYTLGSPPFETADLKETYRCIKQVHYTLP
 ASLSLPAEQLLAAILRASPRDRPSIDQILRHDFFTKGYTPDRLPISSCVTPDLTPPNPARSLFAKVTKS
 LFRGKKKSKNHAQERDEVSLVSGLMRTSVGHQDARPEAPAASGPAPVSLVETAPEDSSPRGTLASSGDG
 FEEGLTVATVVESALCALRNCIAFMPPAEQNPAPLAQPEPLVWVSKWVDYSNKFGFYQLSSRRVAVLFN
 NGTHMALSANRKTVHYNPTSTKHFSFVGAVPRALQPQLGILRYFASYMEQHLMKGGDLPSVEEVEVPAP
 PLLLQWVKTDQALLMLFSDGTQVNFYGDHTKILSGWEPLLVTFFVARNRSACTYLASHLRQLGCSPLDR
 QRLRYALRLLDRSPA

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

SgfI-MluI

Cloning Scheme:



ACCN: NM_004073

ORF Size: 1938 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.

RefSeq: [NM_004073.4](#)

RefSeq Size: 2369 bp

RefSeq ORF: 1941 bp

Locus ID: 1263

UniProt ID: [Q9H4B4](#)

Cytogenetics: 1p34.1

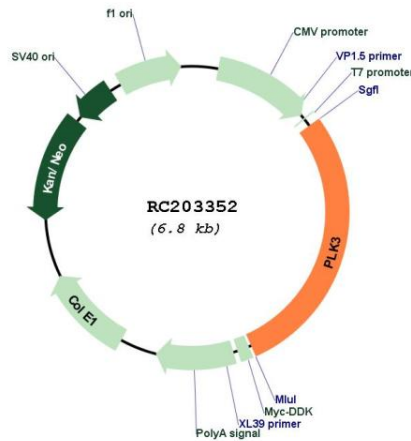
Domains: pkinase, POLO_box, TyrKc, S_TKc

Protein Families: Druggable Genome, Protein Kinase

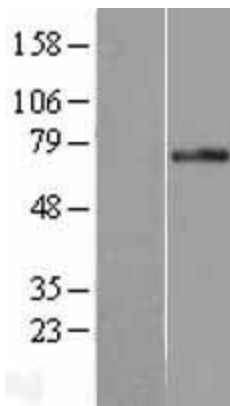
MW: 71.6 kDa

Gene Summary:

The protein encoded by this gene is a member of the highly conserved polo-like kinase family of serine/threonine kinases. Members of this family are characterized by an amino-terminal kinase domain and a carboxy-terminal bipartite polo box domain that functions as a substrate-binding motif and a cellular localization signal. Polo-like kinases are important regulators of cell cycle progression. This gene has also been implicated in stress responses and double-strand break repair. In human cell lines, this protein is reported to associate with centrosomes in a microtubule-dependent manner, and during mitosis, the protein becomes localized to the mitotic apparatus. Expression of a kinase-defective mutant results in abnormal cell morphology caused by changes in microtubule dynamics and mitotic arrest followed by apoptosis. [provided by RefSeq, Sep 2015]

Product images:


Circular map for RC203352



Western blot validation of overexpression lysate (Cat# [LY418239]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC203352 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).