

Product datasheet for **SC117577**

PLK3 (NM_004073) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	PLK3 (NM_004073) Human Untagged Clone
Tag:	Tag Free
Symbol:	PLK3
Synonyms:	CNK; FNK; PLK-3; PRK
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL4</u>
E. coli Selection:	Ampicillin (100 ug/mL)



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Fully Sequenced ORF:

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>OriGene ORF sequence for NM_004073 edited
ATGGAGCCTGCCGCCGTTTCCTGTCTCCGCGCCCTTCCAGCGTGCGGCCGCCGCGCCC
GCTCCCCCGGCCGGGCCCGGCCCTCCGAGTGCCTTGC GCGGACCTGAGCTGGAGATG
CTGGCCGGGCTACCGACGTACAGACCCCGGGCGCCTCATCACGGACCCGCGCAGCGGCCGC
ACCTACCTCAAAGGCCGTTGTTGGCAAGGGGGCTTCGCCCGTGTACGAGGCCACT
GACACAGAGACTGGCAGCGCCTACGCTGTCAAAGTCATCCCGCAGAGCCGCTGCCCAAG
CCGCATCAGCGCGAGAAGATCCTAAATGAGATTGAGCTGCACCGAGACCTGCAGCACCCG
CACATCGTGCGTTTTTCGCACCCTTTGAGGACGCTGACAACATCTACATTTTCTTGAG
CTCTGCAGCCGAAAGTCCTGGCCACATCTGGAAGGCCCGCACACCCTGTTGGAGCCA
GAAGTGCCTACTACCTGCGGCAGATCCTTTCTGGCTCAAGTACTTGACCAGCGCGGC
ATCTTGACCAGGACCTCAAGTTGGGAAATTTTTTCATCACTGAGAACATGGAAGTGAAG
GTGGGGGATTTTGGGCTGGCAGCCCGTTGGAGCCTCCGGAGCAGAGGAAGAAGACCATC
TGTGGCACCCCAACTATGTGGCTCCAGAAGTGTGTGACAGAGGCCACGGCCCTGAG
GCGGATGTATGGTCACTGGGCTGTGTATGTACACGCTGCTGCGGGAGCCCTCCCTTT
GAGACGGCTGACCTGAAGGAGACGTACCGCTGCATCAAGCAGTTCACTACACGTCGCT
GCCAGCCTCTCACTGCCTGCCCGCAGCTCCTGGCCGCCATCCTTCGGGCCTCACCCGA
GACCGCCCTCTATTGACCAGATCCTGCGCCATGACTTCTTTACCAAGGGCTACACCCCC
GATCGACTCCCTATCAGCAGCTGCGTGACAGTCCAGACCTGACACCCCAACCCAGCT
AGGAGTCTGTTTGCCAAAGTTACCAAGAGCCTCTTTGGCAGAAAGAAGAAGTAAGAAT
CATGCCCAGGAGAGGGATGAGGTCTCCGGTTTGGTGAGCGGCCTCATGCGCACATCCGTT
GGCCATCAGGATGCCAGGCCAGAGGCTCCAGCAGCTTCTGGCCAGCCCTGTGAGCCTG
GTAGAGACAGCACCTGAAGACAGCTCACCCCGTGGGACACTGGCAAGCAGTGGAGATGGA
TTTGAAGAAGGTCTGACTGTGGCCACAGTAGTGGAGTCAGCCCTTTGTGCTCTGAGAAAT
TGTATAGCCTTCATGCCCCAGCGGAACAGAACCAGCCCCCTGGCCAGCCAGAGCCT
CTGGTGTGGGTCAGCAAGTGGGTTGACTACTCCAATAAGTTTCGGCTTTGGGTATCAACTG
TCCAGCCCGCTGTGGCTGTGCTCTTCAACGATGGCACACATATGGCCCTGTGCGCCAAC
AGAAAGACTGTGCACTACAATCCCACCAGCACAAAGCACTTCTCCTTCTCCGTGGGTGCT
GTGCCCCGGGCCCTGCAGCCTCAGCTGGGTATCCTGCGGTA CTTCGCTCCTACATGGAG
CAGCACCTCATGAAGGTGGAGATCTGCCAGTGTGGAAGAGGTAGAGGTACCTGCTCCG
CCCTTGTGCTGCAGTGGTCAAGACGGATCAGGCTCTCCTCATGCTGTTTAGTGATGGC
ACTGTCCAGGTGAACCTTCTACGGGGACCACCAAGCTGATTCTCAGTGGCTGGGAGCCC
CTCCTTGTGACTTTTGTGCCCGAAATCGTAGTGCTTGTACTTACCTCGTTCCACCTT
CGGCAGCTGGGCTGCTCTCCAGACCTGCGGCAGGACTCCGCTATGCTCTGCGCCTGCTC
CGGGACCGCAGCCAGCCTAG
    
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5' Read Nucleotide Sequence:

>OriGene 5' read for NM_004073 unedited
 GCAAGAATTTGTAATACGACNACTATAGGGCGGCCGGAATTCGCACCAGGCAAATCCAG
 GCAGCGCCACGCGCGGCCGGGGCCGGGCGGAACCGATAAGCCGGGACCGCGCTGCGACGC
 GCCGGCCGCATGGAGCCTGCCGCGGTTTCTGTCTCCGCGCCCCCTCCAGCGTGGCGAC
 GCCGCGCCCGTCCCCCGGCCGGGCCGGGCGCCTCCGAGTGCCTTGCGCGGACCTGAG
 CTGGAGATGCTGGCCGGGCTACCGACGTCAGACCCCGGGCGCCTCATCACGGACCCGCGC
 AGCGGCCGCACCTACCTCAAAGCCGCTTGTGGGCAAGGGGGGCTTCGCCCGCTGCTAC
 GAGGCCACTGACACAGATACTGGCATCGCCTACGCTGTCAAAGTCATCCCGCATAGCCGC
 GTCGCCAAGCCGCATCATCGCGAGAAGATCCTAAATGAGATTGAGCTGCACCGAGACCTG
 CAGCACCGCCACATCGTGCCTTTTTCGCACCACTTTGAGGACGCTGACAACATCTACATT
 TTCTTGGAGCTCTGCAGCCGAAAGTCCCTGGCCACATCTGGAATGCCCGGCACACCCTG
 TTGGAGCCAGAAGTGGCTACTACCTGCGGACAGATCCTTTCTGGCCTCAAGTACTTGAC
 CAGCGCGCATCTGCACCGGACCTCAAGTTGTGAAATCTTTTCACTGAGAACATG
 GAACTGAAGGTGGGGATTNTGAGCTGGCATCCAGTTGGATCCTTCGGAGCAAAGGATG
 AGACCATCTGTGGCACCCACAATATGTGGCTNCATAAGTGTGCTGATACATGACCACN
 GNCTAGAGCGGATGATGGTCACTGGGCTGTGTATGTACACACTGCTTAGCGGAGCC
 CCTCCCTTGAGACNGCTGACCTGNAGGAGACCTACAGCTGCATCAAGCAGTTCACTACA
 CGCTGNCTGGCANNCTNTACTGNCTGGCAGGNAGNTCTGGNCGCTT

3' Read Nucleotide Sequence:

>OriGene 3' read for NM_004073 unedited
 TTTCCGCAATAGCTTGNACCGCGCTTTCTANNGATCGATTTTTTTTTTTTTTTTTTTT
 TTTTTTCAAATTCGAAAATTGTTTATTATCCTAGGAGGAGCCCCCTGGGGCTCACA
 TCCAATAAATAAGTGTCTGACAATAAATAAAAGTGGTCCATAAATAACGCCCCCTAGCT
 GGGAGCTAAGGCTCAGGCTTATCTTGGAGATGGGGTAGGAGCCAGCGAAGACAAGCCGCC
 CCAAATCCAGTAAAGCTGGTCCCTGATCCCTGGGGGATTTCGGCCAAAGCCCCCAGTG
 AGGCACCAAAGGAAGGGGAAGGCCACAAAGGCAAGGGCCAGAGCCTGACAGGCACAGGC
 CTCAGGCCTCAGGGCTTGGGTCTAGGCTGGGCTGCGGTCCCGGAGCAGGCGCAGAATCA
 TAGCGGAGTCGCTGCCGAGGTCTGGAGAGCAGCCAGCTGCCGAAGGTGGGAAGCGAGG
 TAAGTACAAACTACGATTTCCGGGCCACAAAAGTCACAAGGAGGGGCTCCCAGCCACTG
 AGAATCAGCTTGGTGTGGTCCCCGTAGAAGTTCACCTGGACAGTGCCATCACTAAACAGC
 ATGAGGAGAGCCTGATCCGTCTTGACCCACTGCAGCAGCAAGGGCGGAGCAGGTACTCT
 ACCTCTTCCACACTGGGACAGATCTCCACCCTTCATGAGGTGCTGCTCCATGTAGGAGGC
 AAGTACCGCAGGATACCCAGCTGAGGCTGCAGGGCCCGGGGCACAGCACCCACGGAGAAG
 GAGAAGTGCTTTGTGCTGGTGGGATTGTAGTGACAGTCTTTCTGTTGGCCGACAGGGCC
 ATATGTGTGCCATCGTTGAAGACACAGCCACACGGCGCTGGACAGTTGATCCCAA

Restriction Sites:

NotI-NotI

ACCN:

NM_004073

Insert Size:

2200 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](#)

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_004073.2](#), [NP_004064.2](#)

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

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]