

## Product datasheet for **SC323648**

### 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><a href="#">pCMV6-XL4</a></u>
E. coli Selection:	Ampicillin (100 ug/mL)



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**Fully Sequenced ORF:** >OriGene ORF within SC323648 sequence for NM\_004073 edited (data generated by NextGen Sequencing)

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ATGGAGCCTGCCGCGGTTTCTGTCTCCGCGCCCTTCCAGCGTGCGGCCGCCGCGCC
GCTCCCCGGCCGGCCCGGGCCGCTCCGAGTGCCTTGC GCGGACCTGAGCTGGAGATG
CTGGCCGGGTACCGACGTACAGCCCCGGGCGCCTCATCACGGACCCGCGCAGCGGCCG
ACCTACCTCAAAGGCCGCTTGTGGCAAGGGGGGCTTCGCCCCGTGCTACGAGGCCACT
GACACAGAGACTGGCAGCGCCTACGCTGTATGGTCATCCCGCAGAGCCGCTCGCCAAG
CCGCATCAGCGCGAGAAGATCCTAAATGAGATTGAGCTGCACCGAGACCTGCAGCACCG
CACATCGTGCGTTTTTTCGCCACTTTGAGGACGCTGACAACTACATTTTTCTTGAG
CTCTGCAGCCGAAAGTCCCTGGCCACATCTGGAAGGCCGCGCACACCCTGTTGGAGCCA
GAAGTGCCTACTACCTGCGGCAGATCCTTTCTGGCCTCAAGTACTTGACCAGCGCGGC
ATCTTGACCCGGACCTCAAGTTGGGAAATTTTTTTCATCACTGAGAACATGGAACGAAG
GTGGGGGATTTTGGGCTGGCAGCCCGTTGGAGCCTCCGAGCAGAGGAAGAAGACCATC
TGTGGCACCCCAACTATGTGGTCCAGAAGTGTGCTGAGACAGGGCCACGGCCCTGAG
GCGGATGTATGGTCACTGGGCTGTGTATGTACACGCTGCTCTGCGGGAGCCCTCCCTTT
GAGACGGCTGACCTGAAGGAGACGTACCCTGCATCAAGCAGGTTCACTACACGCTGCT
GCCAGCCTCTCACTGCCTGCCCGCAGCTCCTGGCCGCCATCCTTCGGGCCTCACCCGA
GACCGCCCTCTATTGACCAGATCCTGCGCCATGACTTCTTTACCAAGGGCTACACCCCC
GATCGACTCCCTATCAGCAGCTGCGTGACAGTCCCAGACCTGACACCCCAACCCAGCT
AGGAGTCTGTTTGCCAAAGTTACCAAGAGCCTCTTTGGCAGAAAGAAGAAGTAAGAAT
CATGCCAGGAGAGGGATGAGGTCTCCGGTTTGGTGAGCGGCCTCATGCGCACATCCGTT
GGCCATCAGGATGCCAGGCCAGAGGCTCCAGCAGCTTCTGGCCAGCCCTGTGAGCCTG
GTAGAGACAGCAGCTGAAGACAGCTCACCCCGTGGGACACTGGCAAGCAGTGGAGATGGA
TTTGAAGAAGGTCTGACTGTGGCCACAGTAGTGAGTCAGCCCTTTGTGCTCTGAGAAAT
TGTATAGCCTTTCATGCCCCAGCGGAACAGAACCAGCCCGCCCTGGCCAGCCAGAGCCT
CTGGTGTGGGTACGAAGTGGGTTGACTACTCCAATAAGTTTCGGCTTTGGGTATCAACTG
TCCAGCCGCCGTGTGGCTGTGCTCTTCAACGATGGCACACATATGGCCCTGTGGCCAAC
AGAAAGACTGTGCACTACAATCCCACCAGCACAAAGCACTTCTCCTTCTCCGTGGGTGCT
GTGCCCGGGCCCTGCAGCCTCAGCTGGGTATCCTGCGGTA CTTCGCTCTACATGGAG
CAGCACCTCATGAAGGTGGAGATCTGCCAGTGTGGAAGAGGTAGAGGTACCTGCTCCG
CCCTTGCTGCTGCACTGGGTCAAGACGGATCAGGCTCTCCTCATGCTGTTTAGTGATGGC
ACTGTCCAGGTGAACCTTACGGGGACCACCAAGCTGATTCTCAGTGGCTGGGAGCC
CTCCTTGTA CTTTTGTGGCCGAAATCGTAGTGCTTGTACTTACCTCGCTTCCACCTT
CGGCAGCTGGGCTGCTCTCCAGACCTGCGGCAGCGACTCCGCTATGCTCTGCGCCTGCTC
CGGACCCGAGCCAGCCTAG
    
```

Clone variation with respect to NM\_004073.2  
 272 a=>t;273 a=>g

**5' Read Nucleotide Sequence:**

>OriGene 5' read for mutant NM\_004073 unedited

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CCCCCGTTGAGCAATGGGCGGTAGGCGTGACGGTGGGAGGTCTATATAAGCAGAGCTCGTTTAGTGAA
CCGTGAGAATTTTGAATACGACTCACTATAGGGCGGCCGGAATTCGGCACAGGCAAATCCAGGCAGC
GCCACGCGCGCCGGGGCCGGGCGGAACCGAGAAGCCGGGACCGCGCTGCGACGCGCCGGCCGATGGAG
CCTGCCCGGTTTCTGTCTCCGCGCCCTTCCAGCGTGC GGCCGCGCCGCTCCCCGGCCGGGC
CCGGGCCGCTCCGAGTGCTTTCGCGGACCTGAGCTGGAGATGCTGGCCGGGCTACCGAGTGGGAGCC
GGGGCGCCTCATACGGACCCGCGCAGCGCCGACCTACCTCAAGGCCGCTTGTGGGCAAGGGGGGGC
TTGCCCCGCTGGCTACGAGGCACTGACCCGAACCTGCAGCGGCCTACCCTGTATGGTATTCGCAAGCC
TGTGCGCAACCGCATACCCAAGAGATCTTATGGAATTGGCTGCCCGAAGTGGCACCCCCGACTGTGTG
TTTCCGACCATTTAAGCG
    
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<b>Kinase Domain Sequence:</b>	>SC323648 kinase domain raw sequence. By performing <a href="#">BLASTX</a> analysis with this sequence against NCBI reference protein database, you can confirm the presence of the kinase-deficient mutation CYYTGMGCAATGGGCGGTAGGCGGTGTACGGTGGGAGGTCTATATAAGCAGAGCTCGTTTAGTGAACCGTC AGAATTTTGTAAACGACTCACTATAGGGCGGCCGGAATTCGGCACCAGGCAAATCCAGGCAGCGCCAC GCGCGCCGGGGCCGGGCGGAACCGAGAAGCCGGGACCGCGCTGCGACGCGCCGGCCGCATGGAGCCTGC CGCCGGTTTCTGTCTCCGCGCCCTTCCAGCGTGC GGCCGCCGCG
<b>Restriction Sites:</b>	Please inquire
<b>ACCN:</b>	NM_004073
<b>Insert Size:</b>	2200 bp
<b>OTI Disclaimer:</b>	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 <a href="mailto:custsupport@origene.com">custsupport@origene.com</a> 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. <a href="#">More info</a>
<b>OTI Annotation:</b>	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." <a href="#">Cell, 2008 May p536-548.</a>
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"> <li>1. Centrifuge at 5,000xg for 5min.</li> <li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li> <li>3. Close the tube and incubate for 10 minutes at room temperature.</li> <li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li> <li>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.</li> </ol>
<b>RefSeq:</b>	<a href="#">NM_004073.2</a> , <a href="#">NP_004064.2</a>
<b>RefSeq Size:</b>	2369 bp
<b>RefSeq ORF:</b>	1941 bp
<b>Locus ID:</b>	1263
<b>UniProt ID:</b>	<a href="#">Q9H4B4</a>

<b>Cytogenetics:</b>	1p34.1
<b>Domains:</b>	pkinase, POLO_box, TyrKc, S_TKc
<b>Protein Families:</b>	Druggable Genome, Protein Kinase
<b>Gene Summary:</b>	<p>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]</p>