

## Product datasheet for **SC323363**

### PLK1 (NM\_005030) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	PLK1 (NM_005030) Human Untagged Clone
Tag:	Tag Free
Symbol:	PLK1
Synonyms:	PLK; STPK13
Mammalian Cell Selection:	None
Vector:	<u><a href="#">pCMV6-XL5</a></u>
E. coli Selection:	Ampicillin (100 ug/mL)



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**Fully Sequenced ORF:** >NCBI ORF sequence for NM\_005030, the custom clone sequence may differ by one or more nucleotides

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ATGAGTGTCTGCAGTACTGCAGGGAAGCTGGCACGGGCACCGCCGACCCTGGGAAAGCCGGGTCCCCG
GAGTTGCAGCTCCCGGAGCTCCGGCGGGCTCCACCGGCGAAAGAGATCCCGGAGTCTAGTGGACCC
ACGCAGCCGGCGCGCTATGTGCGGGGCGCTTTTGGCAAGGGCGGCTTTGCCAAGTCTCGAGATC
TCGGACGCGGACACCAAGGAGGTTCGCGGGCAAGATTGTCCTAAGTCTCTGCTGCTCAAGCCGACC
AGAGGGAGAAGATGTCCATGAAATATCCATTCACCGCAGCCTCGCCACCAGCAGCTCGTAGGATTCCA
CGGCTTTTTCGAGGACAACGACTTCGTGTTCTGTTGGAGCTCTGCCGCGGAGGTCTCTCTGGAG
CTGCACAAGAGGAGGAAAGCCCTGACTGAGCCTGAGGCCGATACTACCTACGGCAAATTGTGCTGGCT
GCCAGTACTGCACCGAAACCGAGTTATTCATCGAGACCTCAAGCTGGGCAACCTTTTCTGAATGAAGA
TCTGGAGGTGAAAATAGGGGATTTGGACTGGCAACCAAAGTGAATATGACGGGAGAGGAAGAAGACC
CTGTGTGGGACTCCTAATTACATAGCTCCCGAGGTGCTGAGCAAGAAAGGGCACAGTTTCGAGGTGGATG
TGTGGTCCATTGGGTGTATCATGTATACCTTGTAGTGGGCAAACCACCTTTTGGACTTCTTGCCTAAA
AGAGACCTACCTCCGGATCAAGAAGAATGAATACAGTATTCCTAAGCACATCAACCCCGTGGCCGCTCC
CTCATCCAGAAGATGCTTCAGACAGATCCCACTGCCCGCCCAACCATTAACGAGCTGCTTAAAGCAGT
TCTTTACTTCTGGCTATATCCCTGCCGCTCTCCCATCACCTGCCTGACCATTCCACCAAGGTTTTCGAT
TGCTCCAGCAGCCTGGACCCAGCAACCGGAAGCCCTCACAGTCTCAATAAAGGCTTGGAGAACCC
CTGCCTGAGCGTCCCGGGAAAAAGAAGAACAGTGGTTCGAGAGACAGGTGAGGTGGTTCGACTGCCACC
TCAGTGACATGCTGCAGCAGCTGCACAGTGTCAATGCCTCAAGCCCTCGGAGCGTGGGCTGGTCAAGCA
AGAGGAGGCTGAGGATCCTGCCTGCATCCCATCTTCTGGGTGAGCAAGTGGGTGGACTATTCGACAAG
TACGGCTTGGGTATCAGCTCTGTGATAACAGCGTGGGGTGTCTTCAATGACTCAACACGCTCATCC
CTACAATGATGGTGACAGCCTGCAGTACATAGAGCGTGACGGCACTGAGTCTACTCACCGTGAGTTC
CCATCCCAACTCCTTGATGAAGAAGATCACCTCCTTAAATATTTCCGCAATTACATGAGCGAGCACTTG
CTGAAGGCAGGTGCCAACATCACGCCGCGGAAGGTGATGAGCTCGCCCGGCTGCCCTACCTACGGACCT
GGTTCGACCCCGCAGCGCCATCATCTGCACCTCAGCAACGGCAGCGTGCAGATCAACTTCTTCCAGGA
TCACACCAAGCTCATCTTGTGCCACTGATGGCAGCCGTGACCTACATCGACGAGAAGCGGGACTCCGC
ACATACCCGCTGAGTCTCTGGAGGAGTACGGCTGCTGCAAGGAGCTGGCCAGCCGGCTCCGCTACGCC
GCACTATGGTGGACAAGCTGCTGAGCTCACGCTCGCCAGCAACCGTCTCAAGGCCTCCTAA
    
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**5' Read Nucleotide Sequence:**

>OriGene 5' read for mutant NM\_005030 unedited

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CCGCCGTTTCAGCAACTGGGCGGTAGGCGTGTACGGTGTGGAGGTCTATATAAGCAGAGCTCGTTAGT
GAACCGTCAGAATTTTGAATACGACTCACTATAGGGCGGCCGGAATTCGGCACGAGGTGCAGCGCAGC
TTCGGGAGCATGAGTGTGCAGTACTGCAGGGAAGCTGGCACGGGCACCGCCGACCCTGGGAAAGCCG
GGTCCCGGAGTTGCAGTCCCGGAGCTCCGGCGGGCTCCACCGGCGAAAGAGATCCCGGAGGTCTCT
AGTGGACCCAGCAGCCGCGGCGCTATGTGCGGGCCGCTTTTTTGGCAAGGGCGGCTTTGCCATGTG
TGTGTGTGATCTCGGACGCGGACACCAAGGAGGTGTTGCGGGCATGATTGTGCCTAAGTCTCTGCTGCG
CAAGCCGACCCAGAGGGAGGAGGATGTCCATGAAATATCCATTCACCGCAGCCTCGCCACCAGCAGCT
CGTAGATTGCACGCTTTTTCGAGACACGACTTCGTGTCGTGTGTGAGCTTCTGCCCGGAGGTCCCTTCT
GAGCTGCCAGAAGGAGGAAAGCCCTGACTGACTGAGCCCGACCTACTACGCAATTGTGCCTGCTGCAGTA
CTGCCGACCGAGTTATTCTCTGAACTCTAGCCTTGCCAACGTTTCTGAATTGAAACTCGGAGGTGAAA
TCGGGAAATTGCTTGACACAGTGTCAAATTGACGAGAGAGAAACCGTGTGGGCATCCATTCATCTCCAG
TGCGTGAACGAAAGGCCAATCAAGAGTTGTGCACTGGTTCATAGTCACGTAAGACCACTTTTGACTCTCT
CCATGAACACTCGGTATAGAACGATTAGTCTCAGACATTCTGTCGACTCT
    
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<b>Kinase Domain Sequence:</b>	>SC323363 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 CCTTGMGCAATGGGCGGTAGGCKGTACGGTGGGAGGTCTATATAAGCAGAGCTCGTTTAGTGAACCGTCA GAATTTTGTAAACGACTCACTATAGGGCGGCCGGAATTCGGCACGAGGTGCAGCGCAGTTCCGGGAGC ATGAGTGCTGCAGTGACTGCAGGGAAGCTGGCACGGGCACCGCCGACCTGGGAAAGCCGGGGTCCCCG GAGTTGCAGCTCCCGGAGCTCCGGCGGGCGCTCCACCGCGAAAG
<b>Restriction Sites:</b>	Please inquire
<b>ACCN:</b>	NM_005030
<b>Insert Size:</b>	2300 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_005030.3</a> , <a href="#">NP_005021.2</a>
<b>RefSeq Size:</b>	2204 bp
<b>RefSeq ORF:</b>	1812 bp
<b>Locus ID:</b>	5347

<b>UniProt ID:</b>	<u><a href="#">P53350</a></u>
<b>Cytogenetics:</b>	16p12.2
<b>Domains:</b>	pkinase, POLO_box, TyrKc, S_TKc
<b>Protein Families:</b>	Druggable Genome, Protein Kinase
<b>Protein Pathways:</b>	Cell cycle, Oocyte meiosis, Progesterone-mediated oocyte maturation
<b>Gene Summary:</b>	The Ser/Thr protein kinase encoded by this gene belongs to the CDC5/Polo subfamily. It is highly expressed during mitosis and elevated levels are found in many different types of cancer. Depletion of this protein in cancer cells dramatically inhibited cell proliferation and induced apoptosis; hence, it is a target for cancer therapy. [provided by RefSeq, Sep 2015]