

Product datasheet for **RN203318**

Plk4 (NM_001107669) Rat Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Plk4 (NM_001107669) Rat Untagged Clone
Tag:	Tag Free
Symbol:	Plk4
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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Fully Sequenced ORF: >RN203318 representing NM_001107669
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGGCGCGTGCATCGGAGAGAGGATCGAGGACTTTAAGTTGGAATCTACTTGGTAAAGGATCATTTG
 CTGGTCTCTATAATTACTTTGAAGATAACAATTACGTATACCTGGTATTAGAAATGTGCCACAACGGAGA
 AATGAACAGGTACCTAAAGAACAGAATGAAGCCAGGCACCTTCATGCACCAGATCATCACAGGAATGCTG
 TATCTTCATTCTCACGGCATACTACACCGCAGCTCACACTCTCTAACATCTTACTTACACGGAATATGA
 ACATAAAAATTGCTGACTTTGGACTAGCAACACAATTGAAAATGCCACATGAGAAGCATTACACCTGTG
 TGGAAACCCTAATTATATTTACCAGAAATGCAACTCGAAGTGCACATGGACTTGAATCTGATATTTGG
 TCATTGGGCTGTATGTTTTATACATTACTTATTGGAAGACCACCTTTTGACTGATACAGTCAAAAACA
 CATTGAACAAAGTAGTATTGGCAGATTATGAAATGCCAGCCTTTTGTCCAGAGAGGCCAGGACCTTAT
 CCACCAATTACTTCGTAGAAACCCTGCAGATCGGTTAAGTCTGTCTTCTGTGTTGGACCATCTTTTATG
 TCACGAAATCCTTCAACAAGAGTAAAGACTTAGGGACTGTAGAGGACTCAATGGATAGTGGGCATGCCA
 CACTTCCACAACAATTACAGCTTCTCCGGAACCAGTTTGAGTGGTAGCCTACTTGACAGAAGAAGACT
 TTTGGTTGGTCAACCACTTCAAATAAAATTAAGTATTTCAAAAAATAAAAAATCAAGTGACTTTTCT
 TCAGGAGATGGAAGTAATTTTTGTACTCAATGGGAAATCCAGAACAAGAAGCTAATAATAGGGGGCGGG
 GAAGAGTAATGAAGATGCAGAAGAAAGGCCACATTCTCGATACCTTCGAGAGCTCATTCTCTGATAG
 ATCCAACCCTTCAATCAGTCTCGAGCAAAAACATACTCAATAGAGCGGTGCTCACTCAGTAGAAATGCTT
 TCAAAGCCAGAAAGATCATCACTGGATGAACTAAACACAGTTCCAATCATCATTGTCTAGGGAAAACTC
 CTTTTCCATTTGCAGACCAGACCTCAGATGGAGATAGTACAACAGTGGTTTGGGAATCGCAAATGAA
 TGGAGAAACTAGTGAGCACAACACCATTAGCCCAAACAGAGATTTCCAGGACTATCCTGATGTGCAGGAC
 ACATTAAGAAATACTTGGACTGACACAAGGCCAGCAAGAATTCGATAATTCTGCTAACGTTTCATCCTG
 CAAAGCAGCTGAGTACCATGAAATACATGACTGCACATCACCAAAAACCTGAGATCATGCAGCAAGAGCT
 GGCCATACATCCTCATTCTGAACAAAACAAGAGTAGAAGTATGGAGTCAACATTGGGTTACAGGAAACCT
 ACCTTAAGAAGCATTACCTCTCCTTTGGTTGCTCACAGACTAAAACCAATCAGACAGAAAACCAAAAAGG
 CTGTGGTGAAGTCTTCCAGATATCTAGTATGGGACTACGATCACCGTTTATTACCCAAATGATGGAAGA
 GGCTTTCTCTTGTGATAGACCACCTTGCCACTGACAACATCAGCAGGTACAGCTTTGACAGTTTAC
 CAGAAAAATACTGGCGGAAATATCAGTATGCTTCCAGATTCATTAGCTTGAAGTCCAAAACCTCCAA
 AATCACTTACTTTACAAGATATGCTAAATGATTTTTGATGGAAAAATCTCCTGGTGTGATTTTGAAGTT
 TGGTTTTATGATGGAGCCAAAATACATAAAACAGAAGATGTAATTCACATAAATGAAAAAAGCTGGTTAT
 CTTACACTTTAAAAATGAGAATGACTTTACCAGCTTGAAGAGGAAAGTAAAAATCTATATGGACCATGC
 CAATGAGGGTACCGTACTTGTGGCACTGGAATCTGTAATCTCTGAAGAGGAAAAAAGAAGCAGGGGC
 TCTTCAATCTTCCAATAATTGTAGGAAGAAAACCTGGTACTACTAGTTACCTAAAGCCTTATCACCCAC
 CTCCTGTGGACCCAGGCTACTCAAAGGGAGAGCAAGCATCATCAAGCAGATTGAGCGCAATAGTGGCGC
 TTTCCCAACACAGACACCAGTACTCAGTCTTCTGCTGTGACAGTGAAGGACCTGGCCAACACAGCAGCT
 ACTACAGGAACAAGCATCTCTTCAAGTCTTCTAAATCAGCACAGCTTTTGAATCTGTTTTTGTAAAA
 ATGTTGGTTGGGTACACAGCTAACTAGTGGAGCTGTGTGGGTTCAAGTTAATGATGGGTACAGTTGGT
 TGTCCAGGACAGGAGTATCTTCCATCAGTTATACATCACAGACGGTCCAGCAACTAGGTATGGAGAAAAT
 GAAAAATTGCCTGAATACATCAAACAGAAATGCAATGTCTTTCTCCATCCTTCTGATGTTTTCTAATC
 CAACTCTAGTTTTAGTAA

ACGGCTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAAGTTTAA

Restriction Sites: SgfI-MluI
ACCN: NM_001107669
Insert Size: 2610 bp

OTI Disclaimer:	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
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:	<ol style="list-style-type: none">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:	<u>NM_001107669.1</u> , <u>NP_001101139.1</u>
RefSeq Size:	3299 bp
RefSeq ORF:	2610 bp
Locus ID:	310344
Cytogenetics:	2q25
Gene Summary:	Serine/threonine-protein kinase that plays a central role in centriole duplication. Able to trigger procentriole formation on the surface of the parental centriole cylinder, leading to the recruitment of centriole biogenesis proteins such as SASS6, CENPJ/CPAP, CCP110, CEP135 and gamma-tubulin. When overexpressed, it is able to induce centrosome amplification through the simultaneous generation of multiple procentrioles adjoining each parental centriole during S phase. Phosphorylates 'Ser-151' of FBXW5 during the G1/S transition, leading to inhibit FBXW5 ability to ubiquitinate SASS6. Its central role in centriole replication suggests a possible role in tumorigenesis, centrosome aberrations being frequently observed in tumors. Also involved in deuterosome-mediated centriole amplification in multiciliated that can generate more than 100 centrioles. Also involved in trophoblast differentiation by phosphorylating HAND1, leading to disrupt the interaction between HAND1 and MDFIC and activate HAND1. Phosphorylates CDC25C and CHEK2. Required for the recruitment of STIL to the centriole and for STIL-mediated centriole amplification (By similarity).[UniProtKB/Swiss-Prot Function]