

Product datasheet for **RC206015**

PLK4 (NM_014264) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	PLK4 (NM_014264) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	PLK4
Synonyms:	MCCRP2; SAK; STK18
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC206015 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGCGACCTGCATCGGGGAGAAGATCGAGGATTTTAAAGTTGGAATCTGCTTGGTAAAGGATCATTTG
 CTGGTGTCTACAGAGCTGAGTCCATTACACTGGTTTGAAGTTGCAATCAAATGATAGATAAGAAAGC
 CATGTACAAAGCAGGAATGGTACAGAGAGTCCAAATGAGGTGAAAATACATTGCCAATTGAAACATCCT
 TCTATCTTGGAGCTTTATAACTATTTTGAAGATAGCAATTATGTGTATCTGGTATTAGAAATGTGCCATA
 ATGGAGAAATGAACAGGTATCTAAAGAATAGAGTGAAACCCTTCTCAGAAAATGAAGCTCGACACTTCAT
 GCACCAGATCATCACAGGGATGTTGTATCTTCATTCTCATGGTATACTACACCGGGACCTCACACTTTCT
 AACCTCTACTGACTCGTAATATGAACATCAAGATTGCTGATTTTGGGCTGGCAACTCAACTGAAAATGC
 CACATGAAAAGCACTATACATTATGTGGAACCTCTAACTACATTTACCAGAAAATGCCACTCGAAGTGC
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 TTGCACACTGACACAGTCAAGAACACATTAATAAAGTAGTATTGGCAGATTATGAAATGCCATCTTTTT
 TGTC AATAGAGGCCAAGGACCTTATTCACCAGTACTTCGTAGAAAATCCAGCAGATCGTTTAAAGTCTGTC
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 CAACTACAGCTTCTGGAACAGACATCTCTTCTAATAGTCTAAAAGATTGTCTTCTAAATCAGCACAAC
 TTTGAAATCTGTTTTGTGAAAATGTTGGTGGGCTACACAGTTAACTAGTGGAGCTGTGTGGGTTT CAG
 TTTAATGATGGGTCAGTTGGTTGTGCAGGCAGGAGTGTCTTCTATCAGTTATACCTCACCAAATGGTC
 AAACAAC TAGGTATGGAGAAAATGAAAATACCAGACTACATCAAACAGAAATTACAGTGTCTGTCTTC
 CATCCTTTTGTGTTTTCTAATCCGACTCCTAATTTTCAT

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC206015 protein sequence
 Red=Cloning site Green=Tags(s)

MATCIGEKIEDFKVGNLLGKGSFAGVYRAESIHTGLEVAIKMIDKKAMYKAGMVQRVQNEVKIHCQLKHP
 SILELYNYFEDSNYYVLVLEMCHNGEMNRYLKNRVKPFSENEARHFHQIITGMLYLHSHGILHRDLTLS
 LLLLTRNMNIKIADFLATQLKMPHEKHHTLCGTPNYISPEIATRSAGHLESDVWSLGCMFYTLIGRPP
 FDTDTVKNTLNKVVVLADYEMPSFLSIEAKDLIHQLLRNPADRLSLSSVLDHPPFMSRNSSTKSKDLGTVE
 DSIDSGHATISTAITASSSTISIGSLFDKRRLIIGQLPNKMTVFPKNKSSSTDFSSSGDGNFSYQWGNQ
 ETSNSGRGRVIQDAEERPHSRYLRRAYSDDRSSTNSQSQAQTYTMERCHSAEMLSVSKRSGGGENEERY
 SPTDNNANIFNFKEKTSSSSGSFERPDNNQALSNHLCPGKTPFPFADPTPQTETVQQWFGNLQINAHLR
 KTTEYDSISPNRDFQGHPLQKDTSKNAWTDTKVKNSDASDNAHSVQKQNTMKYMTALHSPKPEIIQQEC
 VFGSDPLSEQSKTRGMEPPWGYQNRRLRSITSPLVAHRLKPIRQKTKKAVVSILDSEEVCELVKEYASQ
 EYVKEVLQISSDNTITIIYYPNGGRGFPLADRPSPDNI SRYSDNLPEKYWRKYQYASRFVQLVRSKS
 PKITYFTRYAKCILMENS PGADFEVWFYDGVKIHKTEDFIQVIEKTKGKSYTLKSESEVNSLKEEIKMYMD
 HANEGHRICLALESIIEEERKTRSAFPFPIIIGRKP GSTSSPKALSPPPSVDSNYPTRERASFNRMMVH
 SAASPTQAPILNPSMVTNEGLGLTTASGTDISSNSLKDCLPKSAQLLKS VYVKNVGNVATQLTSGAVVWQ
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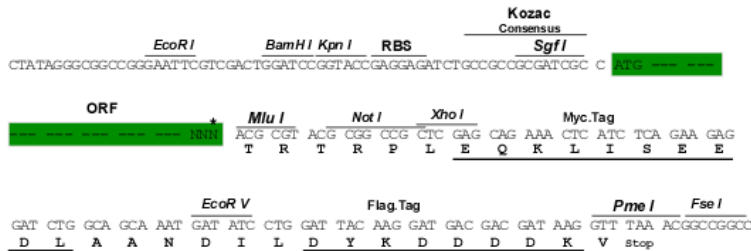
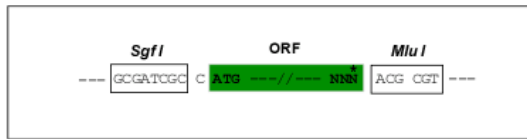
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6202_c04.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

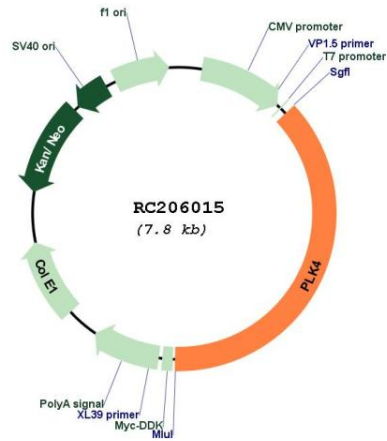
ACCN: NM_014264

ORF Size: 2910 bp

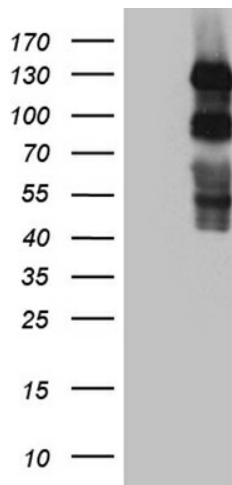
OTI Disclaimer:	Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA 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:	<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.
Note:	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
RefSeq:	NM_014264.5
RefSeq Size:	3870 bp
RefSeq ORF:	2913 bp
Locus ID:	10733
UniProt ID:	O00444
Cytogenetics:	4q28.1
Domains:	pkinase, TyrKc, S_TKc
Protein Families:	Druggable Genome, Protein Kinase
MW:	109 kDa

Gene Summary:

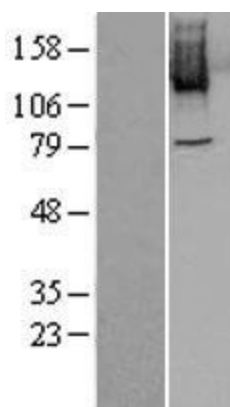
This gene encodes a member of the polo family of serine/threonine protein kinases. The protein localizes to centrioles, complex microtubule-based structures found in centrosomes, and regulates centriole duplication during the cell cycle. Three alternatively spliced transcript variants that encode different protein isoforms have been found for this gene. [provided by RefSeq, Jun 2010]

Product images:


Circular map for RC206015



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY PLK4 (Cat# RC206015, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-PLK4 (Cat# [TA810562])(1:2000). Positive lysates [LY402302] (100ug) and [LC402302] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY402302]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC206015 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).