OriGene Technologies, Inc.
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
https://www.origene.com
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

Product datasheet for RC201795

PLK1 (NM_005030) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	PLK1 (NM_005030) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	PLK1
Synonyms:	PLK; STPK13
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

ORF Nucleotide Sequence:

>RC201795 representing NM_005030
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGAGTGCTGCAGTGACTGCAGGGAAGCTGGCACGGGCACCGGCCGACCCTGGGAAAGCCGGGGTCCCCG
GAGTTGCAGCTCCCGGAGCTCCGGCGGCGGCTCCACCGGCGAAAGAGATCCCGGAGGTCCTAGTGGACCC
ACGCAGCCGGCGGCGCTATGTGCGGGGCCGCTTTTTGGGCAAGGGCGGCTTTGCCAAGTGCTTCGAGATC
TCGGACGCGGACACCAAGGAGGTGTTCGCGGGCAAGATTGTGCCTAAGTCTCTGCTGCTCAAGCCGCACC
AGAGGGAGAAGATGTCCATGGAAATATCCATTCACCGCAGCCTCGCCCACCAGCACGTCGTAGGATTCCA
CGGCTTTTTCGAGGACAACGACTTCGTGTTCGTGGTGTTGGAGCTCTGCCGCCGGAGGTCTCTCCTGGAG
CTGCACAAGAGGAGGAAAGCCCTGACTGAGCCTGAGGCCCGATACTACCTACGGCAAATTGTGCTTGGCT
GCCAGTACCTGCACCGAAACCGAGTTATTCATCGAGACCTCAAGCTGGGCAACCTTTTCCTGAATGAAGA
TCTGGAGGTGAAAATAGGGGATTTTGGACTGGCAACCAAAGTCGAATATGACGGGGAGAGGAAGAAGACC
CTGTGTGGGACTCCTAATTACATAGCTCCCGAGGTGCTGAGCAAGAAAGGGCACAGTTTCGAGGTGGATG
TGTGGTCCATTGGGTGTATCATGTATACCTTGTTAGTGGGCAAACCACCTTTTGAGACTTCTTGCCTAAA
AGAGACCTACCTCCGGATCAAGAAGAATGAATACAGTATTCCCAAGCACATCAACCCCGTGGCCGCCTCC
CTCATCCAGAAGATGCTTCAGACAGATCCCACTGCCCGCCCAACCATTAACGAGCTGCTTAATGACGAGT
TCTTTACTTCTGGCTATATCCCTGCCCGTCTCCCCATCACCTGCCTGACCATTCCACCAAGGTTTTCGAT
TGCTCCCAGCAGCCTGGACCCCAGCAACCGGAAGCCCCTCACAGTCCTCAATAAAGGCTTGGAGAACCCC
CTGCCTGAGCGTCCCCGGGAAAAAGAAGAACCAGTGGTTCGAGAGACAGGTGAGGTGGTCGACTGCCACC
TCAGTGACATGCTGCAGCAGCTGCACAGTGTCAATGCCTCCAAGCCCTCGGAGCGTGGGCTGGTCAGGCA
AGAGGAGGCTGAGGATCCTGCCTGCATCCCCATCTTCTGGGTCAGCAAGTGGGTGGACTATTCGGACAAG
TACGGCCTTGGGTATCAGCTCTGTGATAACAGCGTGGGGGTGCTCTTCAATGACTCAACACGCCTCATCC
TCTACAATGATGGTGACAGCCTGCAGTACATAGAGCGTGACGGCACTGAGTCCTACCTCACCGTGAGTTC
CCATCCCAACTCCTTGATGAAGAAGATCACCCTCCTTAAATATTTCCGCAATTACATGAGCGAGCACTTG
CTGAAGGCAGGTGCCAACATCACGCCGCGCGAAGGTGATGAGCTCGCCCGGCTGCCCTACCTACGGACCT
GGTTCCGCACCCGCAGCGCCATCATCCTGCACCTCAGCAACGGCAGCGTGCAGATCAACTTCTTCCAGGA
TCACACCAAGCTCATCTTGTGCCCACTGATGGCAGCCGTGACCTACATCGACGAGAAGCGGGACTTCCGC
ACATACCGCCTGAGTCTCCTGGAGGAGTACGGCTGCTGCAAGGAGCTGGCCAGCCGGCTCCGCTACGCCC
GCACTATGGTGGACAAGCTGCTGAGCTCACGCTCGGCCAGCAACCGTCTCAAGGCCTCC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC201795 representing NM_005030
Red=Cloning site Green=Tags(s)

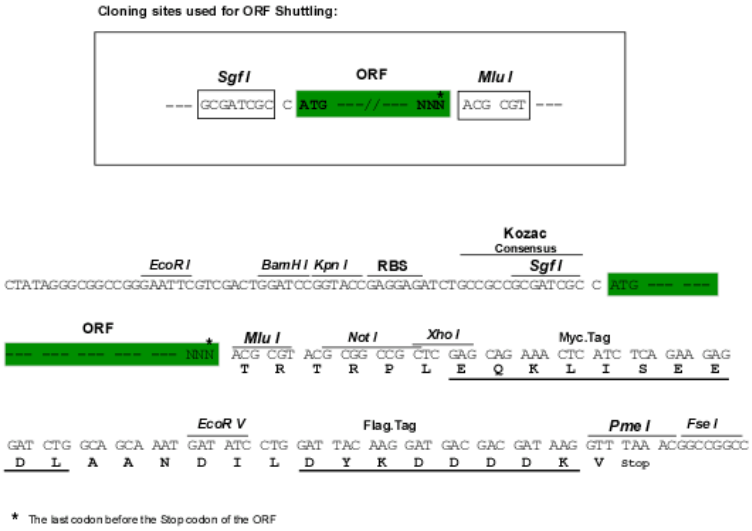
MSAAVTAGKLARAPADPGKAGVPGVAAPGAPAAAPPAKEIPEVLVDPRSRRRYVRGRFLGKGGFAKCFEI
SDADTKEVFAGKIVPKSLLLKPHQREKMSMEISIHRSLAHQHVVGFHGFFEDNDFVFVVLELCRRRSLLE
LHKRRKALTEPEARYYLRQIVLGCQYLHRNRVIHRDLKLGNLFLNEDLEVKIGDFGLATKVEYDGERKKT
LCGTPNYIAPEVLSKKGHSFEVDVWSIGCIMYTLLVGKPPFETSCLKETYLRIKKNEYSIPKHINPVAAS
LIQKMLQTDPTARPTINELLNDEFFTSGYIPARLPITCLTIPPRFSIAPSSLDPSNRKPLTVLNKGLENP
LPERPREKEEPVVRETGEVVDCHLSDMLQQLHSVNASKPSERGLVRQEEAEDPACIPIFWVSKWVDYSDK
YGLGYQLCDNSVGVLFNDSTRLILYNDGDSLQYIERDGTESYLTVSSHPNSLMKKITLLKYFRNYMSEHL
LKAGANITPREGDELARLPYLRTWFRTRSAIILHLSNGSVQINFFQDHTKLILCPLMAAVTYIDEKRDFR
TYRLSLLEEYGCCKELASRLRYARTMVDKLLSSRSASNRLKAS

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mg2861_b01.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_005030

ORF Size: 1809 bp

OTI Disclaimer: 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:
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.

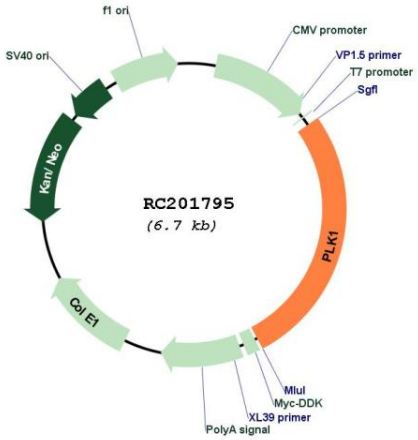
RefSeq: NM_005030.6

RefSeq Size: 2204 bp

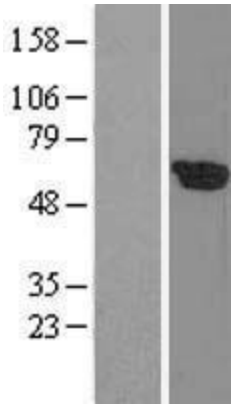
RefSeq ORF: 1812 bp

Locus ID:	5347
UniProt ID:	P53350
Cytogenetics:	16p12.2
Domains:	pkinase, POLO_box, TyrKc, S_TKc
Protein Families:	Druggable Genome, Protein Kinase
Protein Pathways:	Cell cycle, Oocyte meiosis, Progesterone-mediated oocyte maturation
MW:	68.1 kDa
Gene Summary:	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]

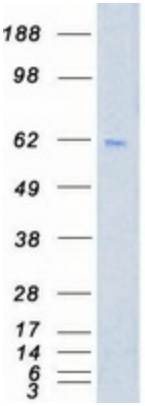
Product images:



Circular map for RC201795



Western blot validation of overexpression lysate (Cat# [LY417592]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC201795 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified PLK1 protein (Cat# [TP301795]). The protein was produced from HEK293T cells transfected with PLK1 cDNA clone (Cat# RC201795) using MegaTran 2.0 (Cat# [TT210002]).