

Product datasheet for **RC227978**

CDK6 (NM_001145306) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CDK6 (NM_001145306) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	CDK6
Synonyms:	MCPH12; PLSTIRE
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC227978 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGAGAAGGACGGCCTGTGCCGCGTGACCAGCAGTACGAATGCGTGCCGGAGATCGGGGAGGGCGCCT
ATGGGAAGGTGTTCAAGGCCCGGACTTGAAGAACGGAGGCCGTTTCGTGGCGTTGAAGCGCGTGCGGGT
GCAGACCGGCGAGGAGGGCATGCCGCTCTCCACCATCCGCGAGGTGGCGGTGCTGAGGCACCTGGAGACC
TTCGAGCACCCCAACGTGGTCAGGTTGTTTGTATGTGTGCACAGTGTACGAACAGACAGAGAAAACCAAC
TAACTTTAGTGTGTTGAACATGTCGATCAAGACTTGACCACTTACTTGGATAAAGTCCAGAGCCTGGAGT
GCCCACTGAAACCATAAAGGATATGATGTTTCAGCTTCTCCGAGGTCTGGACTTCTTTCATTCACACCGA
GTAGTGCATCGCGATCTAAAACCACAGAACATTCTGGTGACCAGCAGCGGACAAATAAACTCGCTGACT
TCGGCCTTGCCCGCATCTATAGTTTCCAGATGGCTCTAACCTCAGTGGTCGTCACGCTGTGGTACAGAGC
ACCCGAAGTCTTGCTCCAGTCCAGCTACGCCACCCCGTGGATCTCTGGAGTGTGGCTGCATATTTGCA
GAAATGTTTCGTAGAAAGCCTCTTTTCGTGGAAGTTCAGATGTTGATCAACTAGGAAAAATCTGGAGC
TGATTGGACTCCAGGAGAAGAAGACTGGCCTAGAGATGTTGCCCTTCCAGGCAGGCTTTTCATTCAA
ATCTGCCCAACCAATTGAGAAGTTTGTAAACAGATATCGATGAAGTGGCAAGACCTACTTCTGAAGTGT
TTGACATTTAACCCAGCCAAAAGAATATCTGCCTACAGTGCCCTGTCTACCCATACTTCCAGGACCTGG
AAAGGTGCAAAGAAAACCTGGATTCCCACTGCCGCCAGCCAGAACACCTCGGAGCTGAATACAGCC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC227978 protein sequence
Red=Cloning site Green=Tags(s)

MEKDGLCRADQQYECVAEIGEGAYGKVKARDLKNNGRFVALKRVRVQTGEEGMPLSTIREVAVLRHLET
 FEHPNVVRLFDVCTVSRDRETKLTLVFEHVDQDLTTYLDKVPPEPGVPTETIKDMMFQLLRGLDFLHSHR
 VVHRDLKPQNILVTSSGQIKLADFLGARIYSFQMALTSVVVTLWYRAPEVLLQSSYATPVDLWSVGCIFA
 EMFRRKPLFRGSSDQDLGKILDVIGLPGCEEDWPRDVALPRQAFHKSQAQPIEFVTDIDELGKDLLLKC
 LTFNPAKRISAYSALSHYPYQDLERCKENLDSHLPPSQNTSELNTA

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6125_a11.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_001145306

ORF Size: 978 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.

RefSeq: [NM_001145306.2](#)

RefSeq Size: 11733 bp

RefSeq ORF: 981 bp

Locus ID: 1021

UniProt ID: [Q00534](#)

Cytogenetics: 7q21.2

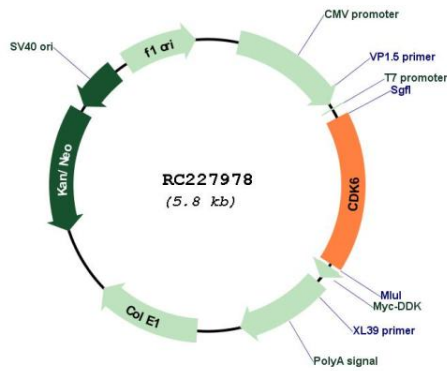
Protein Families: Druggable Genome, Protein Kinase

Protein Pathways: Cell cycle, Chronic myeloid leukemia, Glioma, Melanoma, Non-small cell lung cancer, p53 signaling pathway, Pancreatic cancer, Pathways in cancer, Small cell lung cancer

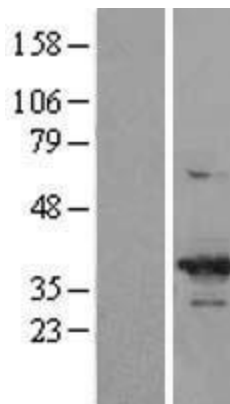
MW: 36.9 kDa

Gene Summary: The protein encoded by this gene is a member of the CMGC family of serine/threonine protein kinases. This kinase is a catalytic subunit of the protein kinase complex that is important for cell cycle G1 phase progression and G1/S transition. The activity of this kinase first appears in mid-G1 phase, which is controlled by the regulatory subunits including D-type cyclins and members of INK4 family of CDK inhibitors. This kinase, as well as CDK4, has been shown to phosphorylate, and thus regulate the activity of, tumor suppressor protein Rb. Altered expression of this gene has been observed in multiple human cancers. A mutation in this gene resulting in reduced cell proliferation, and impaired cell motility and polarity, and has been identified in patients with primary microcephaly. [provided by RefSeq, Aug 2017]

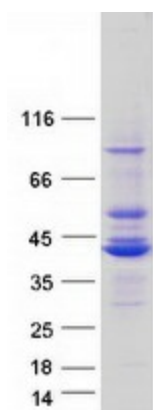
Product images:



Circular map for RC227978



Western blot validation of overexpression lysate (Cat# [LY428809]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC227978 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified CDK6 protein (Cat# [TP327978]). The protein was produced from HEK293T cells transfected with CDK6 cDNA clone (Cat# RC227978) using MegaTran 2.0 (Cat# [TT210002]).