

Product datasheet for **RC200342**

CDK5 (NM_004935) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CDK5 (NM_004935) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	CDK5
Synonyms:	LIS7; PSSALRE
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC200342 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGCAGAAATACGAGAACTGGAAAAGATTGGGAAGGCACCTACGGAAGTGTGTTCAAGGCCAAAAACC
GGGAGACTCATGAGATCGTGGCTCTGAAACGGGTGAGGCTGGATGACGATGATGAGGGTGTGCCGAGTTC
CGCCCTCCGGGAGATCTGCCTACTCAAGGAGCTGAAGCACAAGAACATCGTCAGGCTTCATGACGTCCTG
CACAGCGACAAGAAGCTGACTTTGGTTTTTGAATTCTGTGACCAGGACCTGAAGAAGTATTTTGACAGTT
GCAATGGTGACCTCGATCCTGAGATTGTAAGTCAATTCCTCTCCAGCTACTAAAAGGGCTGGGATTCTG
TCATAGCCGCAATGTGCTACACAGGGACCTGAAGCCCCAGAACCTGCTAATAAACAGGAATGGGGAGCTG
AAATTGGCTGATTTTGGCTGGCTCGAGCCTTTGGGATCCCGTCCGCTGTTACTCAGCTGAGGTGGTCA
CACTGTGGTACCGCCACCGGATGTCTCTTTGGGGCCAAGCTGTACTCCACGTCCATCGACATGTGGTC
AGCCGGCTGCATCTTTCAGAGCTGGCCAATGCTGGGCGGCTCTTTTCCCGCAATGATGTGATGAC
CAGTTGAAGAGGATCTCCGACTGCTGGGACGCCACCGAGGAGCAGTGGCCCTCTATGACCAAGCTGC
CAGACTATAAGCCCTATCCGATGTACCCGGCCACAACATCCCTGGTGAACGTCGTGCCAAAACCTCAATGC
CACAGGGAGGGATCTGCTGCAGAACCTTCTGAAGTGTAACCCTGTCCAGCGTATCTCAGCAGAAGAGGCC
CTGCAGCACCCCTACTTCTCCGACTTCTGTCCGCC

ACGCGTACGCGGGCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC200342 protein sequence
Red=Cloning site Green=Tags(s)

MQKYEKLEKIGEGTYGTVFKAKNRETHEIVALKRVRLDDDDDEGVPSSALREICLLKELKHKNIIVRLHDVL
HSDKKLTLVFEFCDQLKKYFDSCNGDLDPKIVKSFLFQLLKGLGFCHSRNVLHRDLKPQNLLINRNGEL
KLADFLARAFGIPVRCYSAEVVTLWYRPPDVLFGAKLYSTSIDMWSAGCIFAELANAGRPLFPGNVDVDD
QLKRIFRLLGTPTEEQWPSMTKLPDYKPYMPYPATTSLVNVVVKLNATGRDLLQNLKCNPVQRISAEAA
LQHPYFSDFCPP

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6082_b06.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_004935

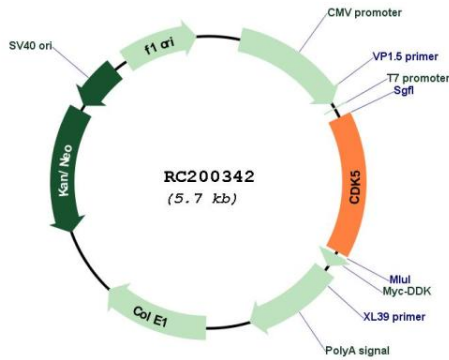
ORF Size: 876 bp

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.

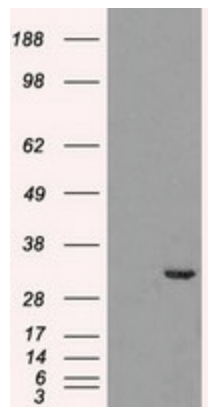
The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in 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.
RefSeq:	NM_004935.4
RefSeq Size:	1211 bp
RefSeq ORF:	879 bp
Locus ID:	1020
UniProt ID:	Q00535
Cytogenetics:	7q36.1
Domains:	pkinase, TyrKc, S_TKc
Protein Families:	Druggable Genome, Protein Kinase
Protein Pathways:	Alzheimer's disease, Axon guidance
MW:	33.3 kDa
Gene Summary:	This gene encodes a proline-directed serine/threonine kinase that is a member of the cyclin-dependent kinase family of proteins. Unlike other members of the family, the protein encoded by this gene does not directly control cell cycle regulation. Instead the protein, which is predominantly expressed at high levels in mammalian postmitotic central nervous system neurons, functions in diverse processes such as synaptic plasticity and neuronal migration through phosphorylation of proteins required for cytoskeletal organization, endocytosis and exocytosis, and apoptosis. In humans, an allelic variant of the gene that results in undetectable levels of the protein has been associated with lethal autosomal recessive lissencephaly-7. Alternative splicing results in multiple transcript variants. [provided by RefSeq, May 2015]

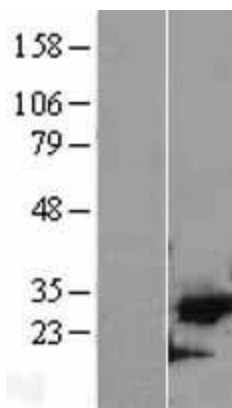
Product images:



Circular map for RC200342



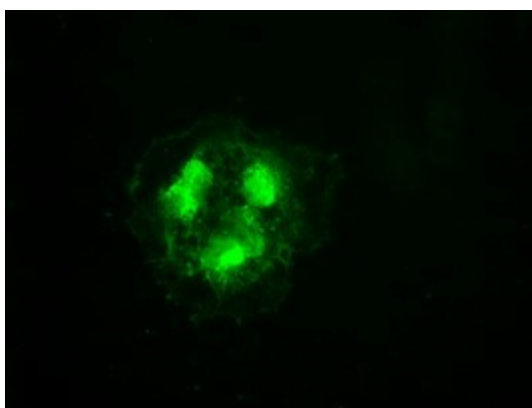
HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY CDK5 (Cat# RC200342, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-CDK5 (Cat# [TA500397]). Positive lysates [LY401536] (100ug) and [LC401536] (20ug) can be purchased separately from OriGene.



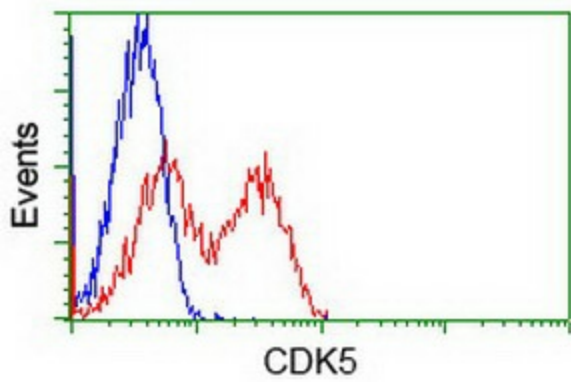
Western blot validation of overexpression lysate (Cat# [LY401536]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC200342 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified CDK5 protein (Cat# [TP300342]). The protein was produced from HEK293T cells transfected with CDK5 cDNA clone (Cat# RC200342) using MegaTran 2.0 (Cat# [TT210002]).



Anti-CDK5 mouse monoclonal antibody ([TA500397]) immunofluorescent staining of COS7 cells transiently transfected by pCMV6-ENTRY CDK5 (RC200342).



HEK293T cells transfected with either RC200342 overexpress plasmid (Red) or empty vector control plasmid (Blue) were immunostained by anti-CDK5 antibody ([TA500397]), and then analyzed by flow cytometry.