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Product datasheet for SC323541

CDK5 (NM_004935) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CDK5 (NM_004935) Human Untagged Clone
Tag:	Tag Free
Symbol:	CDK5
Synonyms:	LIS7; PSSALRE
Mammalian Cell Selection:	None
Vector:	pCMV6-XL4
E. coli Selection:	Ampicillin (100 ug/mL)

Fully Sequenced ORF:

>OriGene ORF within SC323541 sequence for NM_004935 edited (data generated by NextGen Sequencing)

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ATGCAGAAATACGAGAAACTGGAAAAGATTGGGGAAGGCACCTACGGAACTGTGTTCAAG
GCCAAAAACCGGGAGACTCATGAGATCGTGGCTCTGAWRCGGGTGAGGCTGGATGACGAT
GATGAGGGTGTGCCGAGTTCCGCCCTCCGGGAGATCTGCCTACTCAAGGAGCTGAAGCAC
AAGAACATCGTCAGGCTTCATGACGTCCTGCACAGCGACAAGAAGCTGACTTTGGTTTTT
GAATTCTGTGACCAGGACCTGAAGAAGTATTTTGACAGTTGCAATGGTGACCTCGATCCT
GAGATTGTAAAGTCATTCCTCTTCCAGCTACTAAAAGGGCTGGGATTCTGTCATAGCCGC
AATGTGCTACACAGGGACCTGAAGCCCCAGAACCTGCTAATAAACAGGAATGGGGAGCTG
AAATTGGCTGATTTTGGCCTGGCTCGAGCCTTTGGGATTCCCGTCCGCTGTTACTCAGCT
GAGGTGGTCACACTGTGGTACCGCCCACCGGATGTCCTCTTTGGGGCCAAGCTGTACTCC
ACGTCCATCGACATGTGGTCAGCCGGCTGCATCTTTGCAGAGCTGGCCAATGCTGGGCGG
CCTCTTTTTCCCGGCAATGATGTCGATGACCAGTTGAAGAGGATCTTCCGACTGCTTGGG
ACGCCCACCGAGGAGCAGTGGCCCTCTATGACCAAGCTGCCAGACTATAAGCCCTATCCG
ATGTACCCGGCCACAACATCCCTGGTGAACGTCGTGCCCAAACTCAATGCCACAGGGAGG
GATCTGCTGCAGAACCTTCTGAAGTGTAACCCTGTCCAGCGTATCTCAGCAGAAGAGGCC
CTGCAGCACCCCTACTTCTCCGACTTCTGTCCGCCCTAG

Clone variation with respect to NM_004935.3
98 a=>w;99 a=>r;657 g=>t
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5' Read Nucleotide Sequence:

>OriGene 5' read for mutant NM_004935 unedited
CCGCCCGTCTCAGCACTGGGCGGTAGGCGCTGTACGGTGGGAGGTTCTATATAAGCAGAGCTCGTTTAGT
GAACCGTCAGAATCTTGTAATACGACTCACTATAGGGCGGCCGCGAATTCGGCACGAGGCGCAGGGGTCC
CCGCGGCCGCCGCGATGCAGAAATACGAGAAACTGGAAAAGATTGGGGAAGGCACCTACGGAACTGTGTT
CAAGGCCAAAAACCGGGAGACTCATGAGATCGTGGCTCTGATGCGGGTGAGGCTGGATGACGATGATGAG
GGTGTGCCGAGTTCCGCCCTCCGGGAGATCTGCCTACTCAAGGAGCTGAAGCACAAGAACATCGTCAGGC
TTCATGACGTCCTGCACAGCGACAAGAAGCTGACTTTGGTTTTTGAATTCTGTGACCAGGACCTGAGAGT
ATTTTGACAGTTGCAATGGTGACCTCGATCCTGAGATTGTAAAGTCATTCCTCTTCCAGCTACTAAAGGC
TGGATTCTGTCATAGCCGCATGGTGCTAACACAGGGACCTGAGCCCAGAACCTGCTAATAAAAGATGGGG
GAGCTGAACTGCTGATTGCCTGCCTCGAGCTTGGATCCGTCGCGTGTACCTAGCTGAGGTGTCACACGTG
GTTACCCGCCCCCCGGAGTGTCCTCTTTGGCAGCCGTGATTCACAGTCCACTGCACGTGGTCACCCCGGT
CTGATACTTGGCGAGACTGGCATGTCGTGGCGCGCGCCATTCCCGCATATGATGTCCTGATAGCACCTTG
TAGAAGGATCTCCGACATGCTGTGGGAACCCCACAGAGACTGGGCCTTAGCACACACTGTCGCAATATAG
CCATCTCATGAGTCCGCGCACCATCTCCTGGTGAGACGTGGCCCACTACGTGTCCACGAGGAGTCGTCGC
ACCTGAAGAGTAACTCTCGCATCCGAAAGCGTTGCCATTGCATTTGACCTGTACCGCAACGT

Kinase Domain Sequence:

>SC323541 kinase domain raw sequence. By performing BLASTX analysis with this sequence against NCBI refernce protein database, you can confirm the presence of the kinase-deficient mutation
CYCTGMGCAATGGGCGGTAGGCGTGTACGGTGGGAGGTCTATATAAGCAGAGCTCGTTTAGTGAACCGTC
AGAATTTTGTAATACGACTCACTATAGGGCGGCCGCGAATTCGGCACGAGGCGCAGGGGTCCCCGCGGCC
GCCGCGATGCAGAAATACGAGAAACTGGAAAAGATTGGGGAAGGCACCTACGGAACTGTGTTCAAGGCCA
AAAACCGGGAGACTCATGAGATCGTGGCTCTGATGCGGGTGAGGC

Restriction Sites: Please inquire

ACCN: NM_004935

Insert Size: 1200 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 kinase-deficient mutant clone was generated by created by site-directed mutagenesis from the corresponding wild-type clone. See details in "Application of active and kinase-deficient kinome collection for identification of kinases regulating hedgehog signaling." Cell. 2008 May p536-548.

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_004935.2, NP_004926.1
RefSeq Size:	1143 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
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] Transcript Variant: This variant (1) represents the longer transcript and encodes the longer isoform (1). Sequence Note: This RefSeq record was created from transcript and genomic sequence data to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on transcript alignments.