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# Product datasheet for SC323387

## CDK1 (NM_001786) Human Untagged Clone

### Product data:

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|---|---|
| **Product Type:** | Expression Plasmids |
| **Product Name:** | CDK1 (NM_001786) Human Untagged Clone |
| **Tag:** | Tag Free |
| **Symbol:** | CDK1 |
| **Synonyms:** | CDC2; CDC28A; P34CDC2 |
| **Mammalian Cell Selection:** | None |
| **Vector:** | pCMV6-XL5 |
| **E. coli Selection:** | Ampicillin (100 ug/mL) |

**Fully Sequenced ORF:**

>OriGene ORF within SC323387 sequence for NM_001786 edited (data generated by NextGen Sequencing)

ATGGAAGATTATACCAAAATAGAGAAAATTGGAGAAGGTACCTATGGAGTTGTGTATAAG
GGTAGACACAAAACTACAGGTCAAGTGGTAGCCATGATGAAAATCAGACTAGAAAGTGAA
GAGGAAGGGGTTCCTAGTACTGCAATTCGGGAAATTTCTCTATTAAAGGAACTTCGTCAT
CCAAATATAGTCAGTCTTCAGGATGTGCTTATGCAGGATTCCAGGTTATATCTCATCTTT
GAGTTTCTTTCCATGGATCTGAAGAAATACTTGGATTCTATCCCTCCTGGTCAGTACATG
GATTCTTCACTTGTTAAGAGTTATTTATACCAAATCCTACAGGGGATTGTGTTTTGTCAC
TCTAGAAGAGTTCTTCACAGAGACTTAAAACCTCAAAATCTCTTGATTGATGACAAAGGA
ACAATTAAACTGGCTGATTTTGGCCTTGCCAGAGCTTTTGGAATACCTATCAGAGTATAT
ACACATGAGGTAGTAACACTCTGGTACAGATCTCCAGAAGTATTGCTGGGGTCAGCTCGT
TACTCAACTCCAGTTGACATTTGGAGTATAGGCACCATATTTGCTGAACTAGCAACTAAG
AAACCACTTTTCCATGGGGATTCAGAAATTGATCAACTCTTCAGGATTTTCAGAGCTTTG
GGCACTCCCAATAATGAAGTGTGGCCAGAAGTGGAATCTTTACAGGACTATAAGAATACA
TTTCCCAAATGGAAACCAGGAAGCCTAGCATCCCATGTCAAAAACTTGGATGAAAATGGC
TTGGATTTGCTCTCGAAAATGTTAATCTATGATCCAGCCAAACGAATTTCTGGCAAAATG
GCACTGAATCATCCATATTTTAATGATTTGGACAATCAGATTAAGAAGATGTAG

Clone variation with respect to NM_001786.4
98 a=>t;99 a=>g

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**5' Read Nucleotide Sequence:**

>OriGene 5' read for mutant NM_001786 unedited
CCCGCCCGTCTCAGCAACTGGGCGGTAGGCGTGTACGGTTGTGGAGGTCTATATAAGCAGAGCTCGTTTA
GTGAACCGTCAGAATTTTGTAATACGACTCACTATAGGGCGGCCGCGAATTCGGCACGAGGGAGCGGAGA
GCGACGCGGTTGTTGTAGCTGCCGCTGCGGCCGCCGCGGAATAATAAGCCGGGATCTACCATACCCATTG
ACTAACTATGGAAGATTATACCAAAATAGAGAAAATTGGAGAAGGTACCTATGGAGTTGTGTATAAGGGT
AGACACAAAACTACAGGTCAAGTGGTAGCCATGATGAAAAATCAGACTAGAAAGTGAAGAGGAAGGGGTT
CCTTAGTACTGCAATTCGGGAAATTTCTCTATTAAAGGAACTTTCGTCATCCCAATTATAGTCAGTCCTT
CAGGATGGTGCTTATGCAGGATTCCAGGTAATATCCTCATCTTTTGAGTTTCTTTCATGAATCGGAGGAA
ATACTGGGATTCTATCCTTCCTTGTTAGGTCCTTGGAATCTCTTAATTTGTTAGAAGTATTTTTCCAAAA
CCTCCAAGGGATTGGGGTTTGTTAATCCAGGAGAGAGTCTTTACAGAGAGCTTTAAACCTTAAAATCTCT
TGAATGTAGAACAAAGGGAACATATAACCGGGTGAATTTGGCCTTCGCCAACCTTTGAAACTCTCACGAG
ATATACCCCTGAGAGGTATACCCTGGACAGTTTCCGAGAGTGCGTGGTCACTCGTATCAATCCGTGACAT
TGAGATAGGCCCATATGCGACATCAACCTGAACCCTTTCTAGGGATCGAATGTACACTCAGATTCACCCT
GGACTCCATAGATTGGCGAGTAGCTAAGCATTGATACTTCCAATTGACGGAGACAACTTCCTGTCAACTT
GTGA

**Kinase Domain Sequence:**

>SC323387 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
ACKGATGMGCAATGGGCGGTAGGCGTGTACGGTGGGAGGTCTATATAAGCAGAGCTCGTTTAGTGAACCG
TCAGAATTTTGTAATACGACTCACTATAGGGCGGCCGCGAATTCGGCACGAGGGAGCGGAGAGCGACGCG
GTTGTTGTAGCTGCCGCTGCGGCCGCCGCGGAATAATAAGCCGGGATCTACCATACCCATTGACTAACTA
TGGAAGATTATACCAAAATAGAGAAAATTGGAGAAGGTACCTATG

**Restriction Sites:** Please inquire

**ACCN:** NM_001786

**Insert Size:** 1860 bp

**OTI Disclaimer:** Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).

**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_001786.2, NP_001777.1

| | |
|---|---|
| **RefSeq Size:** | 1235 bp |
| **RefSeq ORF:** | 894 bp |
| **Locus ID:** | 983 |
| **UniProt ID:** | P06493 |
| **Cytogenetics:** | 10q21.2 |
| **Domains:** | pkinase, TyrKc, S_TKc |
| **Protein Families:** | Druggable Genome, Protein Kinase, Stem cell - Pluripotency |
| **Protein Pathways:** | Cell cycle, Gap junction, Oocyte meiosis, p53 signaling pathway, Progesterone-mediated oocyte maturation |
| **Gene Summary:** | The protein encoded by this gene is a member of the Ser/Thr protein kinase family. This protein is a catalytic subunit of the highly conserved protein kinase complex known as M-phase promoting factor (MPF), which is essential for G1/S and G2/M phase transitions of eukaryotic cell cycle. Mitotic cyclins stably associate with this protein and function as regulatory subunits. The kinase activity of this protein is controlled by cyclin accumulation and destruction through the cell cycle. The phosphorylation and dephosphorylation of this protein also play important regulatory roles in cell cycle control. Alternatively spliced transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Mar 2009]<br>Transcript Variant: This variant (1) encodes the longest isoform (1). |