

Product datasheet for **RG217634**

CDK2 (NM_052827) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CDK2 (NM_052827) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	CDK2
Synonyms:	CDKN2; p33(CDK2)
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG217634 representing NM_052827 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGAGAACTTCCAAAAGGTGGAAAAGATCGGAGAGGGCACGTACGGAGTTGTGTACAAAGCCAGAAACA
AGTTGACGGGAGAGGTGGTGGCGCTTAAGAAAATCCGCCGACTGAGACTGAGGGTGTGCCAGTAC
TGCCATCCGAGAGATCTCTCTGCTTAAGGAGCTTAACCATCCTAATATTGTCAAGCTGCTGGATGCATT
CACACAGAAAATAAACTCTACCTGGTTTTGAATTTCTGCACCAAGATCTCAAGAAATTCATGGATGCCT
CTGCTCTCACTGGCATTCTCTCCCTCATCAAGAGCTATCTGTTCCAGCTGCTCCAGGGCCTAGCTTT
CTGCCATTCTCATCGGGTCCACCGAGACCTTAAACCTCAGAATCTGCTTATTAACACAGAGGGGGCC
ATCAAGCTAGCAGACTTTGGACTAGCCAGAGCTTTTGGAGTCCCTGTTCTGTACTTACACCCATGAGGTGA
CTCGCCGGGCCCTATCCCTGGAGATTCTGAGATTGACCAGCTCTCCGGATCTTTCCGACTCTGGGGAC
CCCAGATGAGGTGGTGTGGCCAGGAGTTACTTCTATGCCTGATTACAAGCCAAGTTTCCCAAGTGGGCC
CGGCAAGATTTTAGTAAAGTTGTACCTCCCTGGATGAAGATGGACGGAGCTTGTATCGCAAATGCTGC
ACTACGACCCTTACAAGAGGATTCGGCCAAGGCAGCCCTGGCTACCCTTTCTCCAGGATGTACCAA
GCCAGTACCCCATCTTCGACTC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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Protein Sequence: >RG217634 representing NM_052827
 Red=Cloning site Green=Tags(s)

MENFQKVEKIGEGTYGVVYKARNKLTGEVVALKKIRLDTETEGVPSTAIRESLLKELNHPNIVKLLDVI
 HTENKLYLVFEFLHQDLKKFMDASALTGIPPLIKSYLFQLLQGLAFCHSHRVLHRDLKPQNLLINTEGA
 IKLADFLARAFGVPVRTYTHEVTRRALFPGDSEIDQLFRIFRTLGTDPDEVVWPVGTSMPPDYKPSFPKWA
 RQDFSKVVPPLDEDGRSLLSQMLHYDPYKRISAKAALAHPPFFQDVTKPVPHLRL

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_052827

ORF Size: 792 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_052827.1](#), [NP_439892.1](#)

RefSeq Size: 2226 bp

RefSeq ORF: 795 bp

Locus ID: 1017

UniProt ID: [P24941](#)

Cytogenetics: 12q13.2

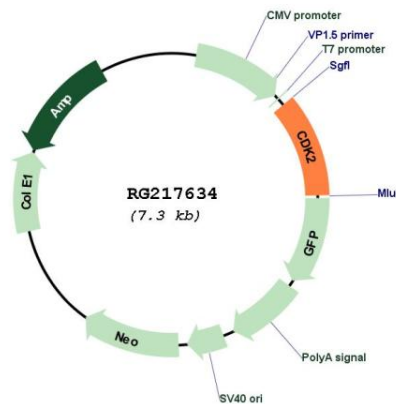
Domains: kinase, TyrKc, S_TKc

Protein Families: Druggable Genome, Protein Kinase

Protein Pathways: Cell cycle, Oocyte meiosis, p53 signaling pathway, Pathways in cancer, Progesterone-mediated oocyte maturation, Prostate cancer, Small cell lung cancer

Gene Summary: This gene encodes a member of a family of serine/threonine protein kinases that participate in cell cycle regulation. The encoded protein is the catalytic subunit of the cyclin-dependent protein kinase complex, which regulates progression through the cell cycle. Activity of this protein is especially critical during the G1 to S phase transition. This protein associates with and regulated by other subunits of the complex including cyclin A or E, CDK inhibitor p21Cip1 (CDKN1A), and p27Kip1 (CDKN1B). Alternative splicing results in multiple transcript variants. [provided by RefSeq, Mar 2014]

Product images:



Circular map for RG217634