

## Product datasheet for MR227529

### Cdkn1a (NM\_007669) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Cdkn1a (NM_007669) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Cdkn1a
Synonyms:	CAP; CAP20; CDK; CDKI; Cdkn; Cdkn1; Cl; CIP1; mda; mda6; P2; P21; p21C; p21Cip1; p21W; p21WAF; SD; SDI1; Waf; Waf1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>MR227529 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCCGCGATCGCC

ATGTCCAATCCTGGTGATGTCCGACCTGTCCGCACAGGAGCAAAGTGTGCCGTTGTCTCTTCGGTCCCG  
TGGACAGTGAGCAGTTGCGCCGTGATTGCGATGCGCTCATGGCGGGCTGTCTCCAGGAGGCCCGAGAACG  
GTGGAACTTTGACTTCGTCACGGAGACGCCGCTGGAGGGCAACTTCGCTGGGAGCGCGTTCCGAGCCTA  
GGGCTGCCCAAGGTCTACCTGAGCCCTGGGTCCCGCAGCCGTGACGACCTGGGAGGGGACAAGAGGCCCA  
GTACTTCTCTGCCCTGCTGCAGGGCCAGCTCCGGAGGACCACGTGGCCTTGTCGCTGTCTTGCACTCT  
GGTGTCTGAGCGGCTGAAGATTCCTCCGGTGGGCCCGAACATCTCAGGGCCGAAAACGGAGGCAGACC  
AGCCTGACAGATTCTATCACTCAAGCGCAGATTGGTCTTCTGCAAGAGAAAACCC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:	>MR227529 protein sequence Red=Cloning site Green=Tags(s)
	MSNPGDVRPVPHRSKVCRCLFGPVDSEQLRRDCDALMAGCLQEARERWNFDFVTETPLEGNFVWERVRS GLPKVYLSPGSRSRDDLGGDKRPSTSSALLQGPAPEDHVALSLSCTLVSRPEDSPGGPGTSQGRKRRQT SLTDFYHSKRRLVFCKRKP
	TRTRPLEQKLISEEDLAANDILDYKDDDDKV



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Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM\_007669

ORF Size: 480 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\\_007669.5](#)

RefSeq Size: 1910 bp

RefSeq ORF: 480 bp

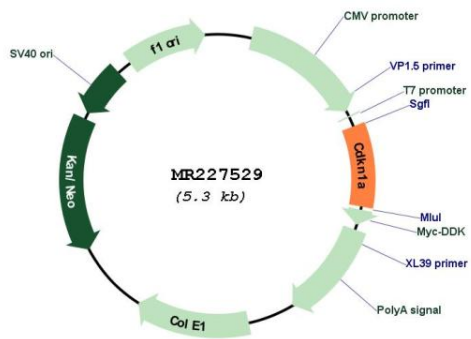
Locus ID: 12575

UniProt ID: [P39689](#)

**Cytogenetics:** 17 15.12 cM  
**MW:** 17.8 kDa

**Gene Summary:** This gene encodes a potent cyclin-dependent kinase inhibitor. The encoded protein binds to and inhibits the activity of cyclin-cyclin-dependent kinase2 or cyclin-dependent kinase4 complexes, and thus functions as a regulator of cell cycle progression at the G1 pahse. The expression of this gene is tightly controlled by the tumor suppressor protein p53, through which this protein mediates the p53-dependent cell cycle G1 phase arrest in response to a variety of stress stimuli. This protein can interact with proliferating cell nuclear antigen, a DNA polymerase accessory factor, and plays a regulatory role in S phase DNA replication and DNA damage repair. This protein was reported to be specifically cleaved by CASP3-like caspases, which thus leads to a dramatic activation of cyclin-dependent kinase2, and may be instrumental in the execution of apoptosis following caspase activation. Mice that lack this gene have the ability to regenerate damaged or missing tissue. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Sep 2015]

**Product images:**



Circular map for MR227529