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Product datasheet for MG227529

Cdkn1a (NM_007669) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Cdkn1a (NM_007669) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Cdkn1a
Synonyms:	CAP; CAP20; CDK; CDKI; Cdkn; Cdkn1; CI; CIP1; mda; mda6; P2; P21; p21C; p21Cip1; p21W; p21WAF; SD; SDI1; Waf; Waf1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)

ORF Nucleotide Sequence:

>MG227529 representing NM_007669
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGTCCAATCCTGGTGATGTCCGACCTGTTCCGCACAGGAGCAAAGTGTGCCGTTGTCTCTTCGGTCCCG
TGGACAGTGAGCAGTTGCGCCGTGATTGCGATGCGCTCATGGCGGGCTGTCTCCAGGAGGCCCGAGAACG
GTGGAACTTTGACTTCGTCACGGAGACGCCGCTGGAGGGCAACTTCGTCTGGGAGCGCGTTCGGAGCCTA
GGGCTGCCCAAGGTCTACCTGAGCCCTGGGTCCCGCAGCCGTGACGACCTGGGAGGGGACAAGAGGCCCA
GTACTTCCTCTGCCCTGCTGCAGGGGCCAGCTCCGGAGGACCACGTGGCCTTGTCGCTGTCTTGCACTCT
GGTGTCTGAGCGGCCTGAAGATTCCCCGGGTGGGCCCGGAACATCTCAGGGCCGAAAACGGAGGCAGACC
AGCCTGACAGATTTCTATCACTCCAAGCGCAGATTGGTCTTCTGCAAGAGAAAACCC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>MG227529 representing NM_007669
Red=Cloning site Green=Tags(s)

MSNPGDVRPVPHRSKVCRCLFGPVDSEQLRRDCDALMAGCLQEARERWNFDFVTETPLEGNFVWERVRSL
GLPKVYLSPGSRSRDDLGGDKRPSTSSALLQGPAPEDHVALSLSCTLVSERPEDSPGGPGTSQGRKRRQT
SLTDFYHSKRRLVFCKRKP

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

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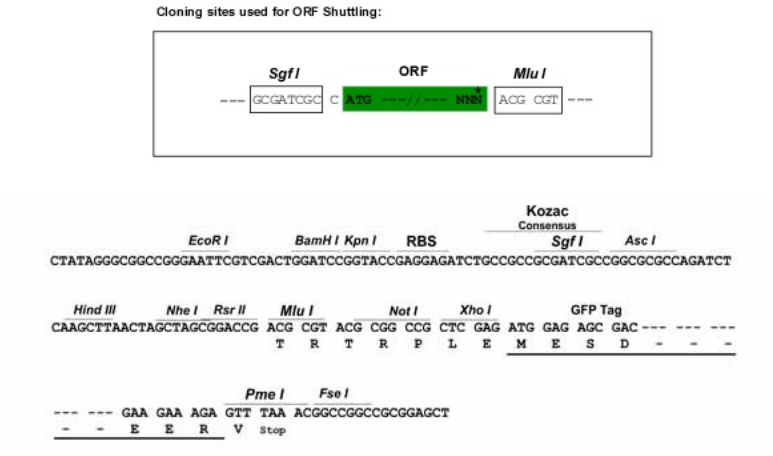
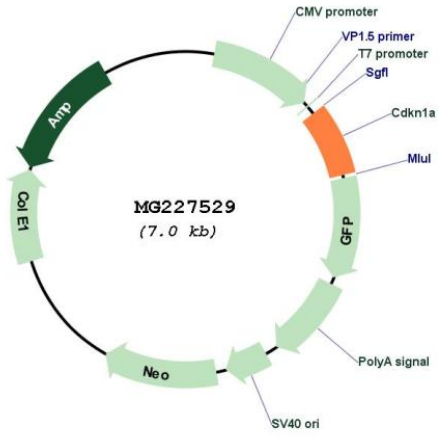
Cloning Scheme:



Plasmid Map:



ACCN:	NM_007669
ORF Size:	477 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
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]