

## **Product datasheet for RG236494**

## p21 (CDKN1A) (NM 001291549) Human Tagged ORF Clone

**Product data:** 

**Product Type:** Expression Plasmids

**Product Name:** p21 (CDKN1A) (NM\_001291549) Human Tagged ORF Clone

Tag: TurboGFP Symbol: CDKN1A

Synonyms: CAP20; CDKN1; CIP1; MDA-6; P21; p21CIP1; SDI1; WAF1

Mammalian Cell Neomycin

Selection:

**Vector:** pCMV6-AC-GFP (PS100010)

E. coli Selection: Ampicillin (100 ug/mL)

ORF Nucleotide >RG236494 representing NM\_001291549.
Sequence: Blue=ORF Red=Cloning site Green=Tag(s)

GATCCGGTACCGAGGAGATCTGCCGCCGCGATCGCC

ATGTGGGGAGTATTCAGGAGACAGCAACTCACTCGTCAAATCCTCCCCTTCCTGGCCAACAAAGCTGC
TGCAACCACAGGGATTTCTTCTGTTCAGGCGCCATGTCAGAACCGGCTGGGGATGTCCGTCAGAACCCA
TGCGGCAGCAAGGCCTGCCGCCGCCTCTTCGGCCCAGTGGACAGCGAGCAGCTGAGCCGCGACTGTGAT
GCGCTAATGGCGGGCTGCATCCAGGAGGCCCGTGAGCCGATGGAACTTCGACTTTGTCACCGAGACACCA
CTGGAGGGTGACTTCGCCTGGGAGCGTGTGCGGGGCCTTGGCCTGCCCAAGCTCTACCTTCCCACGGGG
CCCCGGCGAGGCCGGGATGAGTTGGGAGGAGGCAGGCGGCCTGGCACCTCACCTGCTCTGCAGGGG
ACAGCAGAGGAAGACCATGTGGACCTGTCACTGTCTTGTACCCTTGTGCCTCGCTCAGGGGAGCAGGCT
GAAGGGTCCCCAGGTGGACCTGGAGACTCTCAGGGTCGAAAACCGCCGCAGACCAGCATGACAGATTTC

TACCACTCCAAACGCCGGCTGATCTTCTCCAAGAGGAAGCCC
ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAAAC

Protein Sequence: >Peptide sequence encoded by RG236494

Blue=ORF Red=Cloning site Green=Tag(s)

MWGVFRRQTTHSSNPPLPGQQSCCNHRDFFCSGAMSEPAGDVRQNPCGSKACRRLFGPVDSEQLSRDCD ALMAGCIQEARERWNFDFVTETPLEGDFAWERVRGLGLPKLYLPTGPRRGRDELGGGRRPGTSPALLQG

TAEEDHVDLSLSCTLVPRSGEQAEGSPGGPGDSQGRKRRQTSMTDFYHSKRRLIFSKRKP

TRTRPLEMESDESGLPAMEIECRITGTLNGVEFELVGGGEGTPEQGRMTNKMKSTKGALTFSPYLLSHV MGYGFYHFGTYPSGYENPFLHAINNGGYTNTRIEKYEDGGVLHVSFSYRYEAGRVIGDFKVMGTGFPED SVIFTDKIIRSNATVEHLHPMGDNDLDGSFTRTFSLRDGGYYSSVVDSHMHFKSAIHPSILQNGGPMFA

FRRVEEDHSNTELGIVEYQHAFKTPDADAGEERV

**Restriction Sites:** Sgfl-Mlul



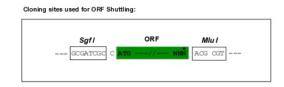
**OriGene Technologies, Inc.** 9620 Medical Center Drive, Ste 200

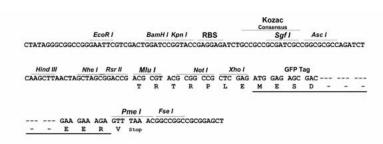
CN: techsupport@origene.cn

Rockville, MD 20850, US Phone: +1-888-267-4436 https://www.origene.com techsupport@origene.com EU: info-de@origene.com

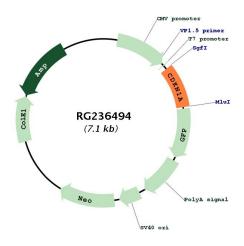


## **Cloning Scheme:**





## Plasmid Map:



**ACCN:** NM\_001291549

ORF Size: 594 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).



**RefSeq:** NM 001291549.3

 RefSeq Size:
 2325 bp

 RefSeq ORF:
 597 bp

 Locus ID:
 1026

 UniProt ID:
 P38936

 Cytogenetics:
 6p21.2

**Protein Families:** Druggable Genome

**Protein Pathways:** Bladder cancer, Cell cycle, Chronic myeloid leukemia, ErbB signaling pathway, Glioma,

Melanoma, p53 signaling pathway, Pathways in cancer, Prostate cancer

MW: 22.4 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 G1. 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. Multiple alternatively spliced

variants have been found for this gene. [provided by RefSeq, Sep 2015]