

Product datasheet for **RG231920**

p21 (CDKN1A) (NM_001220777) Human Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: p21 (CDKN1A) (NM_001220777) Human Tagged ORF Clone
Tag: TurboGFP
Symbol: CDKN1A
Synonyms: CAP20; CDKN1; CIP1; MDA-6; P21; p21CIP1; SDI1; WAF1
Mammalian Cell Selection: Neomycin
Vector: pCMV6-AC-GFP (PS100010)
E. coli Selection: Ampicillin (100 ug/mL)
ORF Nucleotide Sequence: >RG231920 representing NM_001220777
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGATCGCC**

ATGTCAGAACCGGCTGGGGATGTCGTCAGAACCCATGCGGCAGCAAGGCCTGCCGCCCTCTTCGGCC
 CAGTGGACAGCGAGCAGCTGAGCCGCGACTGTGATGCGCTAATGGCGGGTGCATCCAGGAGGCCCGTGA
 GCGATGGAACCTCGACTTTGTACCGAGACACCACTGGAGGGTGACTTCGCTGGGAGCGTGTGCGGGC
 CTTGGCCTGCCAAGCTCTACCTCCCACGGGGCCCCGGCGAGGCCGGGATGAGTTGGGAGGAGGCAGGC
 GGCTGGCACCTCACCTGCTCTGCTGCAGGGGACAGCAGAGGAAGACCATGTGGACTGTACTGTCTTG
 TACCCTTGTGCCTCGCTCAGGGGAGCAGGCTGAAGGGTCCCAGGTGGACTGGAGACTCTCAGGGTCGA
 AAACGGCGGCAGACCAGCATGACAGATTCTACCACTCCAACGCCGGCTGATCTTCTCCAAGAGGAAGC
 C

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >RG231920 representing NM_001220777
 Red=Cloning site Green=Tags(s)

MSEPAGDVRQNPCGSKACRRLFGPVDSEQLSRDCDALMAGCIQEARERWNFDFVTETPLEGDFAWERVGR
 LGLPKLYLPTGPRRGRDELGGRRPGTSPALLQGTAEEDHVDLSL SCTLVPRSGEQAEQSPGGPGDSQGR
 KRRQTSMTDFYHSKRRLIFSKRKP

TRTRPLE - GFP Tag - V

Restriction Sites: Sgfl-MluI



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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:	<ol style="list-style-type: none">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:	<u>NM_001220777.2</u>
RefSeq Size:	2119 bp
RefSeq ORF:	495 bp
Locus ID:	1026
UniProt ID:	<u>P38936</u>
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
Gene Summary:	<p>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]</p>