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Product datasheet for SC305767

p16INK4A (CDKN2A) (NM_058197) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	p16INK4A (CDKN2A) (NM_058197) Human Untagged Clone
Tag:	Tag Free
Symbol:	p16INK4A
Synonyms:	ARF; CDK4I; CDKN2; CMM2; INK4; INK4A; MLM; MTS-1; MTS1; P14; P14ARF; P16; P16-INK4A; P16INK4; P16INK4A; P19; P19ARF; TP16
Mammalian Cell Selection:	None
Vector:	pCMV6-XL5
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>OriGene sequence for NM_058197 edited CTCCAGAGGATTTGAGGGACAGGGTCGGAGGGGGCTCTTCCGCCAGCACCGGAGGAAGAA AGAGGAGGGGCTGGCTGGTCACCAGAGGGTGGGGCGGACCGCGTGCGCTCGGCGGCTGCG GAGAGGGGGAGAGCAGGCAGCGGGCGGCGGGGAGCAGCATGGAGCCGGCGGCGGGGAGCA GCATGGAGCCTTCGGCTGACTGGCTGGCCACGGCCGCGGCCCGGGGTCGGGTAGAGGAGG TGCGGGCGCTGCTGGAGGCGGGGGCGCTGCCCAACGCACCGAATAGTTACGGTCGGAGGC CGATCCAGGTGGGTAGAGGGTCTGCAGCGGGAGCAGGGGATGGCGGGCGACTCTGGAGGA CGAAGTTTGCAGGGGAATTGGAATCAGGTAGCGCTTCGATTCTCCGGAAAAAGGGGAGGC TTCCTGGGGAGTTTTCAGAAGGGGTTTGTAATCACAGACCTCCTCCTGGCGACGCCCTGG GGGCTTGGGAAGCCAAGGAAGAGGAATGAGGAGAAGGGC
Restriction Sites:	Please inquire
ACCN:	NM_058197
Insert Size:	500 bp
OTI Disclaimer:	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
OTI Annotation:	This TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.

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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:	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_058197.2, NP_478104.1
RefSeq Size:	1437 bp
RefSeq ORF:	351 bp
Locus ID:	1029
UniProt ID:	P42771
Cytogenetics:	9p21.3
Protein Families:	Druggable Genome
Protein Pathways:	Bladder cancer, Cell cycle, Chronic myeloid leukemia, Glioma, Melanoma, Non-small cell lung cancer, p53 signaling pathway, Pancreatic cancer, Pathways in cancer

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Gene Summary:

This gene generates several transcript variants which differ in their first exons. At least three alternatively spliced variants encoding distinct proteins have been reported, two of which encode structurally related isoforms known to function as inhibitors of CDK4 kinase. The remaining transcript includes an alternate first exon located 20 Kb upstream of the remainder of the gene; this transcript contains an alternate open reading frame (ARF) that specifies a protein which is structurally unrelated to the products of the other variants. This ARF product functions as a stabilizer of the tumor suppressor protein p53 as it can interact with, and sequester, the E3 ubiquitin-protein ligase MDM2, a protein responsible for the degradation of p53. In spite of the structural and functional differences, the CDK inhibitor isoforms and the ARF product encoded by this gene, through the regulatory roles of CDK4 and p53 in cell cycle G1 progression, share a common functionality in cell cycle G1 control. This gene is frequently mutated or deleted in a wide variety of tumors, and is known to be an important tumor suppressor gene. [provided by RefSeq, Sep 2012]
Transcript Variant: This variant (3) contains an alternate open reading frame (ARF), when compared to variants 1 or 4. The ARF results from an alternative splicing between a distinct first exon, which contains the translation start codon, and the common second exon. Thus, the protein encoded by this variant (p12) lacks sequence similarity to the protein product of variant 4. This variant is specifically expressed in pancreas, and has been described in PMID:10445844. It is a candidate for nonsense-mediated mRNA decay (NMD), but it is not known if the endogenous protein is expressed in vivo. Sequence Note: This RefSeq record was created from transcript and genomic sequence data to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on transcript alignments.

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