

Product datasheet for **SC305765**

p16INK4A (CDKN2A) (NM_058195) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	p16INK4A (CDKN2A) (NM_058195) 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:	<u>pCMV6-XL5</u>
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	<p>>OriGene sequence for NM_058195 edited</p> <p>ATGGGCAGGGGGCGGTGCGTGGGTCCCAGTCTGCAGTTAAGGGGGCAGGAGTGGCGCTGC TCACCTCTGGTGCCAAAGGGCGGCGCAGCGGCTGCCGAGCTCGGCCCTGGAGGCGGCGAG AACATGGTGCGCAGGTTCTTGGTGACCTCCGGATTGCGCGCGCGTGCGGCCCGCCGCA GTGAGGGTTTTCTGGTTACATCCCGCGGCTCACGGGGGAGTGGGCAGCGCCAGGGGCG CCCGCCGCTGTGGCCCTCGTGCTGATGCTACTGAGGAGCCAGCGTCTAGGGCAGCAGCCG CTTCCTAGAAGACCAGGTCATGATGATGGGCAGCGCCGAGTGGCGGAGCTGCTGCTGCT CCACGGCGCGGAGCCAACTGCGCCGACCCGCCACTCTACCCGACCCGTGCACGACGC TGCCCGGGAGGGCTTCTGGACACGCTGGTGGTGTGTCACCGGGCCGGGGCGCGGCTGGA CGTGCGCGATGCCTGGGGCCGTGCCCCGTGGACCTGGCTGAGGAGCTGGGCCATCGCGA TGTCGCACGGTACCTGCGCGCGGCTGCGGGGGGACCAGAGGCAGTAACCATGCCCGCAT AGATGCCGCGGAAGTCCCTCAGACATCCCGATTGAAAGAACCAGAGAGGCTCTGAGAA ACCTCCGAAACTTAGATCATCAGTCACCGAAGTCTACAGGGCCACAACCTGCCCCGC CACAACCCACCCGCTTTCGTAGTTTTTCAATTTAGAAAATAGAGCTTTTAAAAATGTCCTG CCTTTTAACTAGATATATGCCTTCCCCCACTACCGTAAATGTCCATTTATATCATTTTT TATATATTCTTATAAAAAATGTAAGAAAAAGAAAAAAAAAAAAAAAAAAAAA</p>



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5' Read Nucleotide Sequence:	<p>>OriGene 5' read for NM_058195 unedited</p> <pre> GTTACATTTGTATACGACTCATATAGGCGGCCGCGATTCTGGGCAGGGGGCGGTGCGTG GGTCCCACTCTGCAGTTAAGGGGGCAGGAGTGGCGCTGCTCACCTCTGGTGCCAAAGGGC GGCGCAGCGGCTGCCGAGCTCGGCCCTGGAGGCGGCGAGAACATGGTGCGCAGGTTCTTG GTGACCTCCGGATTCCGGCGCGGTGCGGCCCGCCGCGAGTGAGGGTTTTCTGGTTTAC ATCCCGCGGCTCACGGGGGAGTGGGCAGCGCCAGGGGCGCCCGCGCTGTGGCCCTCGTG CTGATGCTACTGAGGAGCCAGCGTCTAGGGCAGCAGCCGCTTCTAGAAGACCAGGTCAT GATGATGGGCAGCGCCGAGTGGCGGAGCTGCTGCTGCTCCACGGCGCGGAGCCCAACTG CGCCGACCCCGCACTCTCACCCGACCCGTGCACGACGCTGCCCGGAGGGCTTCTGGA CACGCTGGTGGTGTGCACCGGGCGGGGCGCGGCTGGACGTGCGCGATGCCTGGGGCCG TCTGCCCTGGACCTGGCTGAGGAGCTGGGCCATCGCGATGTGCGACGGTACCTGCGCGC GGCTGCGGGGGCACCAGAGGCAGTAACCATGCCCGCATAGATGCCGCGGAAGGTCCCTC AGACATCCCCGATTGAAAGAACCAGAGAGGCTCTGAGAAACCTCCGAAACTTAGATCAT CAGTCACCGAAGGTCCTACAGGGCCACAACCTGCCCCGCCACAACCCACCCCGCTTCGT AGTTTTCATTTAAGAAAATAGAGCTTTTAAAAATGTCCTGGCCTTTTAC </pre>
Restriction Sites:	Please inquire
ACCN:	NM_058195
Insert Size:	900 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:	The open reading frame of this TrueClone was fully sequenced and found to be a perfect match to the protein associated to this reference.
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_058195.2</u> , <u>NP_478102.1</u>
RefSeq Size:	1154 bp
RefSeq ORF:	522 bp
Locus ID:	1029
UniProt ID:	<u>Q8N726</u>
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
Gene Summary:	<p>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]</p> <p>Transcript Variant: This variant (4), also known as beta, encodes p14ARF. Transcripts 1 and 4, encoding p16INK4a and p14ARF have distinct first exons which contain the translation start codon, and share a common second exon, which is translated in different reading frames. Thus, the p14ARF protein encoded by this variant (4) lacks sequence similarity to the protein product of variant 1 (p16INK4a). Note that this variant may use an alternative upstream start codon, which would produce an isoform that is 41 aa longer at the N-terminus, or an alternative downstream start codon, which would produce an isoform (smARF, described in PMID:16713577) that is 47 aa shorter at the N-terminus; it is unclear if the isoforms derived from the alternative start codons are present in vivo. The p14ARF protein is known to be nucleoplasmic but may also be recruited to mitochondria, as described in PMID:20107316.</p>