

## Product datasheet for **RC402694**

### **p27 KIP 1 (CDKN1B) (NM\_004064) Human Mutant ORF Clone**

#### **Product data:**

<b>Product Type:</b>	Mutant ORF Clones
<b>Product Name:</b>	p27 KIP 1 (CDKN1B) (NM_004064) Human Mutant ORF Clone
<b>Mutation Description:</b>	E172K
<b>Affected Codon#:</b>	172
<b>Affected NT#:</b>	514
<b>Nucleotide Mutation:</b>	CDKN1B Mutant (E172K), Myc-DDK-tagged ORF clone of Homo sapiens cyclin-dependent kinase inhibitor 1B (p27, Kip1) (CDKN1B) as transfection-ready DNA
<b>Effect:</b>	Acute lymphoblastic leukaemia
<b>Symbol:</b>	CDKN1B
<b>Synonyms:</b>	CDKN4; KIP1; MEN1B; MEN4; P27KIP1
<b>E. coli Selection:</b>	Kanamycin (25 ug/mL)
<b>Mammalian Cell Selection:</b>	Neomycin
<b>Vector:</b>	pCMV6-Entry (PS100001)
<b>Tag:</b>	Myc-DDK
<b>ACCN:</b>	NM_004064
<b>ORF Size:</b>	594 bp
<b>Restriction Sites:</b>	Sgfl-Mlul



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**ORF Nucleotide Sequence:**

>RC402694 representing NM\_004064  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATG**CAACAGT**CGGAGTGTCTAACGGGAGCCCTAGCCTGGAGCGGATGGACGCCAGCGAGCGGGAGCACC  
 CCAAGCCCTCGGCCTGCAGGAACCTCTTCGGCCCGGTGGACCACGAAGAGTTAACCCGGGACTTGGAGAA  
 GCACTGCAGAGACATGGAAGAGGCGAGCCAGCGCAAGTGAATTTTCGATTTTCAGAATCACAACCCTA  
 GAGGGCAAGTACGAGTGGCAAGAGGTGGAGAAGGGCAGCTTGCCTCGAGTTCTACTACAGACCCCCGCGGC  
 CCCCCAAAGTGCCTGCAAGGTGCCGGCGCAGGAGAGCCAGGATGTCAGCGGGAGCCGCCGGCGCGCC  
 TTTAATTGGGGCTCCGGCTAACTCTGAGGACACGCATTTGGTGGACCCAAAGACTGATCCGTCCGACAGC  
 CAGACGGGTTAGCGGAGCAATGCGCAGGAATAAGGAAGCGACCTGCAACCGACGATTCTTCTACTCAA  
 AAAAAAGACCAACAGAACAGAAAAAATGTTTCAGACGGTCCCAAATGCCGGTCTGTGGAGCAGAC  
 GCCAAGAAGCCTGGCCTCAGAAGACGTCAAAC

AG**CGGACCG**ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC  
 TGGATTACAAGGATGACGACGA TAAGGTTTAA

**Protein Sequence:**

>RC402694 representing NM\_004064  
 Red=Cloning site Green=Tags(s)

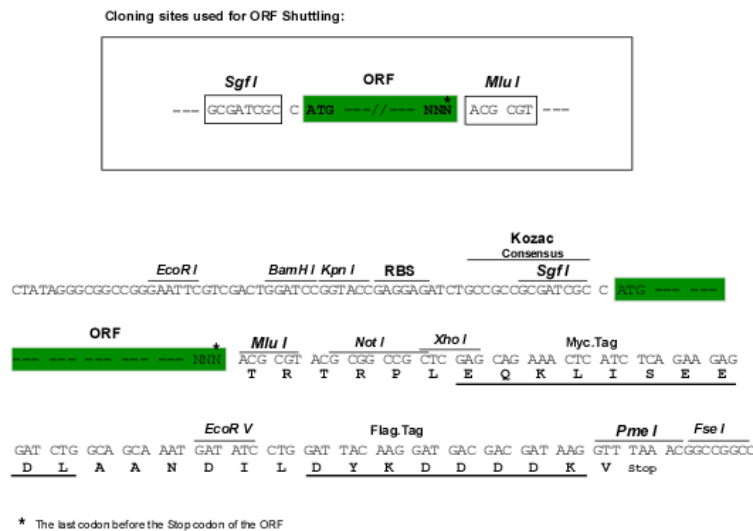
MSNVRVSNGPSLERMDARQAEHPKPSACRNLFGPVDHEELTRDLEKHCRCMEEASQRKWNFDQNHKPL  
 EGKYEWEVEKGSLEPEFYRPPRPPKACKVPAQESQDVSGSRPAAPLIGAPANSEDLHLVDPKTDPSDS  
 QTGLAEQCAGIRKRPATDSSSTQNKRANRTEKNVSDGSPNAGSVEQTPKKPGLRRRQT

**SGP**TRRRRL**EQKLI**SEEDLAANDILDYKDDDDK**V**

**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**



<b>OTI Disclaimer:</b>	<p>Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at <a href="mailto:custsupport@origene.com">custsupport@origene.com</a> or by calling 301.340.3188 option 3 for pricing and delivery.</p> <p>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. <a href="#">More info</a></p>
<b>OTI Annotation:</b>	<p>This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.</p>
<b>Components:</b>	<p>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).</p>
<b>RefSeq:</b>	<p><a href="#">NP_004055</a></p>
<b>RefSeq Size:</b>	<p>594 bp</p>
<b>RefSeq ORF:</b>	<p>597 bp</p>
<b>Locus ID:</b>	<p>1027</p>
<b>Cytogenetics:</b>	<p>12p13.1</p>
<b>Domains:</b>	<p>CDI</p>
<b>Protein Families:</b>	<p>Druggable Genome</p>
<b>Protein Pathways:</b>	<p>Cell cycle, Chronic myeloid leukemia, ErbB signaling pathway, Pathways in cancer, Prostate cancer, Small cell lung cancer</p>
<b>MW:</b>	<p>21.8 kDa</p>
<b>Gene Summary:</b>	<p>This gene encodes a cyclin-dependent kinase inhibitor, which shares a limited similarity with CDK inhibitor CDKN1A/p21. The encoded protein binds to and prevents the activation of cyclin E-CDK2 or cyclin D-CDK4 complexes, and thus controls the cell cycle progression at G1. The degradation of this protein, which is triggered by its CDK dependent phosphorylation and subsequent ubiquitination by SCF complexes, is required for the cellular transition from quiescence to the proliferative state. Mutations in this gene are associated with multiple endocrine neoplasia type IV (MEN4). [provided by RefSeq, Apr 2014]</p>