

Product datasheet for **RC400166**

Rb (RB1) (NM_000321) Human Mutant ORF Clone

Product data:

Product Type:	Mutant ORF Clones
Product Name:	Rb (RB1) (NM_000321) Human Mutant ORF Clone
Mutation Description:	R455*
Affected Codon#:	455
Affected NT#:	c.1363
Nucleotide Mutation:	RB1 Mutant (R455*), Myc-DDK-tagged ORF clone of Homo sapiens retinoblastoma 1 (RB1) as transfection-ready DNA
Effect:	Truncation
Symbol:	RB1
Synonyms:	OSRC; p105-Rb; p110-RB1; pp110; PPP1R130; pRb; RB
E. coli Selection:	Kanamycin (25 ug/mL)
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
Tag:	Myc-DDK
ACCN:	NM_000321
ORF Size:	1362 bp
Restriction Sites:	Sgfl-RsrII



[View online »](#)

ORF Nucleotide Sequence:

>RC400166 representing NM_000321
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGCCGCCAAAACCCCGAAAAACGGCCGCCACCGCCGCCGCTGCCGCCGGAAACCCCGGCACCGC
 CGCCGCGCCCTCCTGAGGAGACCCAGAGCAGGACAGCGCCGGAGGACCTGCCTCTCGTCAGGCT
 TGAGTTTGAAGAAACAGAAGAACCTGATTTTACTGCATTATGTCAGAAATTAAGATACCAGATCATGTC
 AGAGAGAGAGCTTGGTTAACTTGGGAGAAAGTTTCATCTGTGGATGGAGTATTGGGAGGTTATATTCAA
 AGAAAAAGGAAGTGTGGGAATCTGTATCTTTATTGCAGCAGTTGACCTAGATGAGATGTCGTTCACTTT
 TACTGAGCTACAGAAAAACATAGAAATCAGTGTCCATAAATCTTTAACTTACTAAAAGAAATTGATACC
 AGTACCAAAGTTGATAATGCTATGTCAAGACTGTTGAAGAAGTATGATGTATTGTTTGCCTCTTCAGCA
 AATTGGAAAGGACATGTGAAGTATATATTTGACACAACCCAGCAGTTTCGATATCTACTGAAATAAATTC
 TGCATTGGTGCTAAAAGTTTCTGGATCACATTTTATTAGCTAAAGGGGAAGTATTACAATGGAAGAT
 GATCTGGTGATTTCAATTCAGTTAATGCTATGTGTCCTTGACTATTTTATAAATCTCACCTCCCATGT
 TGCTCAAAGAACCATATAAAACAGCTGTATACCCATTAAATGGTTCACCTCGAACACCCAGGCGAGGTC
 GAACAGGAGTGCACGGATAGCAAAACAACCTAGAAAATGATACAAGAATTATTGAAGTTCTCTGTAAGAA
 CATGAATGTAATATAGATGAGGTGAAAAATGTTATTTCAAAAATTTTATACCTTTTATGAATTCCTTG
 GACTTGTAACTCTAATGGACTCCAGAGGTTGAAAATCTTTCTAAACGATACGAAGAAATTTATCTTAA
 AAATAAAGATCTAGATGCAAGATTATTTTGGATCATGATAAACTCTTCAGACTGATTCTATAGACAGT
 TTTGAAACACAGAGAACCACGAAAAAGTAACTTGTGAAGAGGTGAATGTAATTCCTCCACACACTC
 CAGTTAGGACTGTTATGAACACTATCCAACAATTAATGATGATTTTAAATTCAGCAAGTATCAACCTTC
 AGAAAACTGATTTCTATTTTAAACAACCTGCACAGTGAATCCAAAAGAAAGTATACTGAAAAGAGTGAAG
 GATATAGGATACATCTTTAAAGAGAAATTTGCTAAAGCTGTGGGACAGGTTGTGTCGAAATTGGATCAC
 AGCGATACAACTTGGAGTTCGCTTGTATTAC

AG**CGGACCG**ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC
 TGGATTACAAGGATGACGACGA TAAGGTTTAA

Protein Sequence:

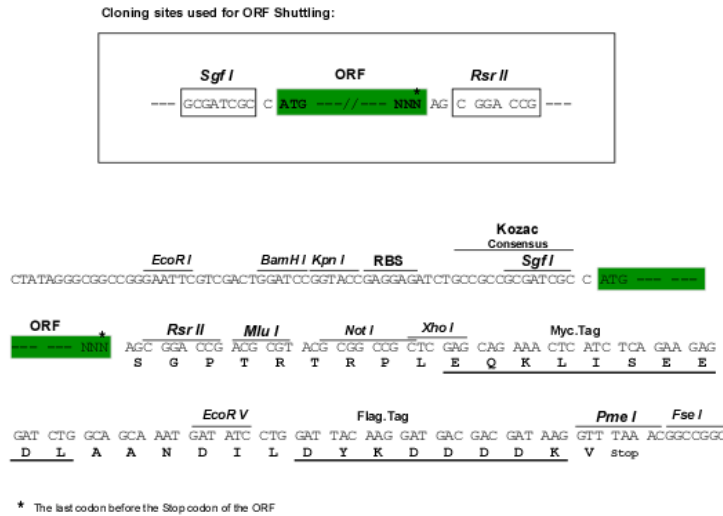
>RC400166 representing NM_000321
 Red=Cloning site Green=Tags(s)

MPPKTPRKTAATAAAAAEPPAPPPPPPEEDPEQDSGPEDLPLVRLFEFEETEEDFTALCQKLIKIPDHV
 RERAWLTWEKVSSVDGVLGGYIQKKELWGICIFIAVDLDEMSFTFTELQKNIEISVHKFFNLLKEIDT
 STKVDNAMSRLKKYDVLFAFSLKERTCELIYLTQPSSSISTEINSALVLKVSWITFLLAKGEVLQMED
 DLVISFQLMLCVLDYFIKLSPPMLLKEPYKTAVIPINGSRTPRRGQNSARIAKQLENDTRIEIVLCKE
 HECNIDEVKNVYFKNFIPFMNSLGLVTSNGLPEVENLSKRYEEIYLNKDLARLFLDHDKTLQTDSIDS
 FETQRTPRKSNLDEEVNIPPHTPVRTVMNTIQQLMMLNSASDQPSENLISYFNNTVNPKESILKRVK
 DIGYIFKEKFAKAVGQGCVEIGSQRYKLGVRLLY

SGPTRTRRLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

Sgfl-RsrII

Cloning Scheme:

OTI Disclaimer:

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 custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

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:

[NP_000312](#)

RefSeq Size:

4772 bp

RefSeq ORF:

2787 bp

Locus ID:

5925

Cytogenetics:

13q14.2

Domains:

RB_B, RB_A, CYCLIN

Protein Families:

Druggable Genome, Transcription Factors

Protein Pathways:	Bladder cancer, Cell cycle, Chronic myeloid leukemia, Glioma, Melanoma, Non-small cell lung cancer, Pancreatic cancer, Pathways in cancer, Prostate cancer, Small cell lung cancer
MW:	51 kDa
Gene Summary:	The protein encoded by this gene is a negative regulator of the cell cycle and was the first tumor suppressor gene found. The encoded protein also stabilizes constitutive heterochromatin to maintain the overall chromatin structure. The active, hypophosphorylated form of the protein binds transcription factor E2F1. Defects in this gene are a cause of childhood cancer retinoblastoma (RB), bladder cancer, and osteogenic sarcoma. [provided by RefSeq, Jul 2008]