

Product datasheet for **RC400164**

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:	R556*
Affected Codon#:	556
Affected NT#:	c.1666
Nucleotide Mutation:	RB1 Mutant (R556*), 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:	1665 bp
Restriction Sites:	Sgfl-RsrII



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ORF Nucleotide Sequence:

>RC400164 representing NM_000321
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGCCGCCAAAACCCCGAAAAACGGCCGCCACCGCCGCCGCTGCCGCCGGAAACCCCGGCACCGC
 CGCCGCCGCCCTCCTGAGGAGACCCAGAGCAGGACAGCGGCCGGAGGACCTGCCTCTCGTCAGGCT
 TGAGTTTGAAGAAACAGAAGAACCTGATTTTACTGCATTATGTCAGAAATTAAGATACCAGATCATGTC
 AGAGAGAGAGCTTGGTTAACTTTGGGAGAAAGTTTCATCTGTGGATGGAGTATTGGGAGGTATATTCAA
 AGAAAAAGGAAGTGTGGGAATCTGTATCTTTATTGCAGCAGTTGACCTAGATGAGATGTCGTTCACTTT
 TACTGAGCTACAGAAAAACATAGAAATCAGTGTCCATAAATCTTTAACTTACTAAAAGAAATTGATAACC
 AGTACCAAAGTTGATAATGCTATGTCAAGACTGTTGAAGAAGTATGATGATTGTTTGCCTCTTCAGCA
 AATTGGAAAGGACATGGAAGTATATATTTGACACAACCCAGCAGTTTCGATATCTACTGAAATAAATTC
 TGCATTGGTGCTAAAAGTTTCTGGATCACATTTTATTAGCTAAAGGGGAAGTATTACAATGGAAGAT
 GATCTGGTGATTTCAATTCAGTTAATGCTATGTGTCCTTGACTATTTTATAAATCTCACCTCCCATGT
 TGCTCAAAGAACCATATAAAACAGCTGTATACCCATTAAATGGTTCACCTCGAACACCCAGGCGAGGTCA
 GAACAGGAGTGCACGGATAGCAAAAACACTAGAAAATGATACAAGAATTATTGAAGTTCTCTGTAAGAA
 CATGAATGTAATATAGATGAGGTGAAAAATGTTATTTCAAAAATTTTATACCTTTTATGAATTCCTTG
 GACTTGTAACTCTAATGGACTTCCAGAGGTTGAAAATCTTTCTAAACGATACGAAGAAATTTATCTTAA
 AAATAAAGATCTAGATGCAAGATTATTTTGGATCATGATAAACTCTTCAGACTGATTCTATAGACAGT
 TTTGAAACACAGAGAACCACGAAAAAGTAACTTATGAAGAGGTGAATGTAATTCCTCCACACACTC
 CAGTTAGGACTGTTATGAACACTATCCAACAATTAATGATGATTTTAAATTCAGCAAGTATCAACCTTC
 AGAAAACTGATTTCTATTTTAAACAACCTGCACAGTGAATCCAAAAGAAAGTATACTGAAAAGAGTGAAG
 GATATAGGATACATCTTTAAAGAGAAATTTGCTAAAGCTGTGGGACAGGTTGTGTGCAATGGATCAC
 AGCGATACAAACTTGGAGTTCGCTTGTATTACCGAGTAATGGAATCCATGCTTAAATCAGAAGAAGAAGC
 ATTATCCATTCAAATTTTAGCAAATCTGAATGACAACATTTTTCATATGCTTTATTGGCGTGCCT
 CTTGAGGTTGTAATGGCCACATATAGCAGAAGTACATCTCAGAATCTTGATTCTGGAACAGATTTGTCTT
 TCCCATGGATTCTGAATGTGCTAATTTAAAAGCCTTTGATTTTACAAAGTATCGAAAGTTTATCAA
 AGCAGAAGGCAACTTGACAAGAGAAATGATAAAACATTTAGAACGATGTGAACAT

AG**CGGACCG**ACGCGTACGCGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC
 TGGATTACAAGGATGACGACGA **TAAGTTTAA**

Protein Sequence:

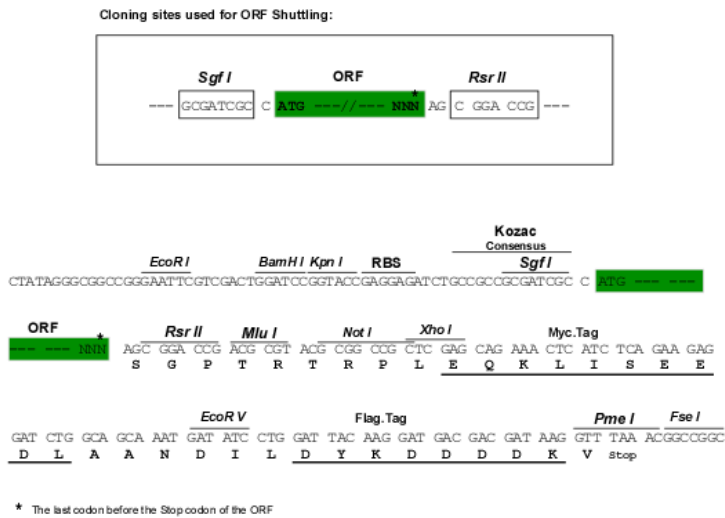
>RC400164 representing NM_000321
 Red=Cloning site Green=Tags(s)

MPPKTPRKTAATAAAAAEPPAPPPPPPEEDPEQDSGPELPLVRLFEETEPEPDTALCQKLKIPDHV
 RERAWLTWEKVSSVDGVLGGYIQKKELWGICIFIAAVDLDEMSFTFTELQKNIEISVHKFFNLLKEIDT
 STKVDNAMSRLKKYDVLFAFSLKERTCELIYLTQPSSSISTEINSALVLKVSWITFLAKGEVLQMED
 DLVISFQLMLCVLDYFIKLSPPMLLKEPYKTAVIPINGSPTPRRGQNRSARIAKQLENDTRIIIEVLCKE
 HECNIDEVKNVYFKNFIPFMNSLGLVTSNGLPEVENLSKRYEEIYLKKNKDLARLFLDHDKTLQTDSDS
 FETQRTPRKSNLDEEVNIPHTPVRTVMNTIQQLMMILNSASDQPSENLISYFNNCTVNPKESILKRVK
 DIGYIFKEKFAKAVGQGCVEIGSQRYKLGVRLYYRVMESMLKSEERLSIQNFSKLLNDNIFHMSLLACA
 LEVVMATYSRSTSQLNSDGLSFPWILNVLNLKAFDFYKVIIESFKAEGNLTREMIKHLERCEH

SGPTRRRLEQKLI**SEEDLAANDILDYKDDDDKV**

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:	63 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]