

## Product datasheet for **RG236281**

### **RPA34 (RPA2) (NM\_001286076) Human Tagged ORF Clone**

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** RPA34 (RPA2) (NM\_001286076) Human Tagged ORF Clone  
**Tag:** TurboGFP  
**Symbol:** RPA34  
**Synonyms:** REPA2; RP-A p32; RP-A p34; RPA32  
**Mammalian Cell Selection:** Neomycin  
**Vector:** pCMV6-AC-GFP (PS100010)  
**E. coli Selection:** Ampicillin (100 ug/mL)  
**ORF Nucleotide Sequence:** >RG236281 representing NM\_001286076.  
Blue=ORF Red=Cloning site Green=Tag(s)

```
GCTCGTTTAGTGAACCGTCAGAATTTGTAAACGACTACTATAGGGCGCCGGGAATTCGTCGACTG
GATCCGGTACCGAGGAGATCTGCCGCCGCGATCGCC
ATGACAGCTGCACCCATGGACGTTCCGACGTGGGTTGACACAGATGACACCAGCAGTGAAAAACACTGTG
GTTCTCCAGAAACATATGTGAAAGTGGCAGGCCACCTGAGATCTTTTCAGAACAAAAAGAGCCTGGTA
GCCTTTAAGATCATGCCCTGGAGGATATGAATGAGTTCACCACACATATTCTGGAAGTGATCAATGCA
CACATGGTACTAAGCAAAGCCAACAGCCAGCCCTCAGCAGGGAGAGCACCTATCAGCAATCCAGGAATG
AGTGAAGCAGGGAACCTTTGGTGGGAATAGCTTCATGCCAGCAAATGGCCTCACTGTGCCAAAAACCAG
GTGTTGAATTTGATTAAGGCTTGTCCAAGACCTGAAGGGTTGAACTTTCAGGATCTCAAGAACCAGCTG
AAACACATGTCTGTATCCTCAATCAAGCAAGCTGTGGATTTTCTGAGCAATGAGGGGCACATCTATTCT
ACTGTGGATGATGACCATTTTAAATCCACAGATGCAGAA
ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAAAC
```

**Protein Sequence:** >Peptide sequence encoded by RG236281  
Blue=ORF Red=Cloning site Green=Tag(s)

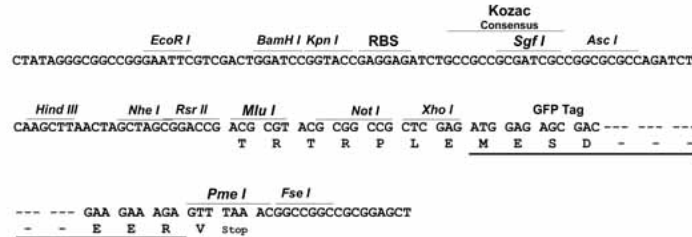
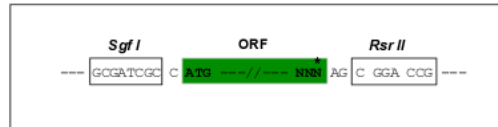
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MTAAPMDVRQWVDTDTSSENTVVPETYVKVAGHLRSFQNKSLVAFKIMPLEDMNEFTTHILEVINA
HMVLSKANSQPSAGRAPISNPGMSEAGNFGGNSFMPANGLTVAQNQVLNLIKACRPEGLNFQDLKNQL
KHMVSVSSIKQAVDFLSNEGHIYSTVDDDFHKSTDAE
TRTRPLEMESDESGLPAMEIECRITGTLNGVEFELVGGEGTPEQGRMTNKMSTKGALTFSPYLLSHV
MGYGFYHFGTYPYSGYENPFLHAINNGGYNTRIEKYEDGGVLVHVSFSYRYEAGRVIGDFKVMGTGFPED
SVIFTDKIIRSNATVEHLHPMGDNDLDGSFTRTFSLRDGGYSSVVDSSHMFKSAIHPSILQNGGPMFA
FRRVEEDHSNTELGIVEYQHAFKTPDADAGEERV
```

**Restriction Sites:** SgfI-RsrII



**Cloning Scheme:**

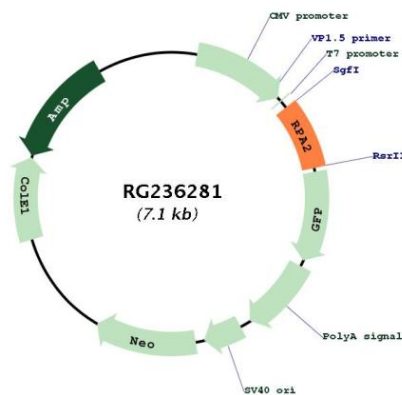
Cloning sites used for ORF Shuttling:



<b>ACCN:</b>	NM_001286076
<b>ORF Size:</b>	522 bp
<b>OTI Disclaimer:</b>	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>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<b>Components:</b>	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).
<b>RefSeq:</b>	<a href="#">NM_001286076.1</a> , <a href="#">NP_001273005.1</a>
<b>RefSeq Size:</b>	1970 bp
<b>RefSeq ORF:</b>	525 bp
<b>Locus ID:</b>	6118
<b>UniProt ID:</b>	<a href="#">P15927</a>
<b>Cytogenetics:</b>	1p35.3
<b>Protein Families:</b>	Druggable Genome, Stem cell - Pluripotency
<b>Protein Pathways:</b>	DNA replication, Homologous recombination, Mismatch repair, Nucleotide excision repair
<b>MW:</b>	19.5 kDa

**Gene Summary:**

This gene encodes a subunit of the heterotrimeric Replication Protein A (RPA) complex, which binds to single-stranded DNA (ssDNA), forming a nucleoprotein complex that plays an important role in DNA metabolism, being involved in DNA replication, repair, recombination, telomere maintenance, and co-ordinating the cellular response to DNA damage through activation of the ataxia telangiectasia and Rad3-related protein (ATR) kinase. The RPA complex protects single-stranded DNA from nucleases, prevents formation of secondary structures that would interfere with repair, and co-ordinates the recruitment and departure of different genome maintenance factors. The heterotrimeric complex has two different modes of ssDNA binding, a low-affinity and high-affinity mode, determined by which oligonucleotide/oligosaccharide-binding (OB) domains of the complex are utilized, and differing in the length of DNA bound. This subunit contains a single OB domain that participates in high-affinity DNA binding and also contains a winged helix domain at its carboxy terminus, which interacts with many genome maintenance protein. Post-translational modifications of the RPA complex also plays a role in co-ordinating different damage response pathways. [provided by RefSeq, Sep 2017]

**Product images:**


Circular map for RG236281