

Product datasheet for **RC205715**

RPA34 (RPA2) (NM_002946) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	RPA34 (RPA2) (NM_002946) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	RPA34
Synonyms:	REPA2; RP-A p32; RP-A p34; RPA32
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC205715 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGGATCGCC**

ATGTGGAACAGTGGATTCGAAAGCTATGGCAGCTCCTCATACGGGGGAGCCGGCGGCTACACGCAGTCCC
CGGGGGGCTTTGGATCGCCCGCACCTTCTCAAGCCGAAAAGAAATCAAGAGCCCGAGCCAGCACATTGT
GCCCTGTACTATATCTCAGCTGCTTTCTGCCACTTTGGTTGATGAAGTGTTCAGAATTGGGAATGTTGAG
ATTTACAGGTCACTATTGTGGGATCATCAGACATGCAGAGAAGGCTCCAACCAACATTGTTTACAAAA
TAGATGACATGACAGCTGCACCCATGGAGTTCGCCAGTGGGTTGACACAGATGACACCAGCAGTAAAA
CACTGTGGTTCCTCCAGAAACATATGTGAAAGTGGCAGGCCACCTGAGATCTTTTCAAGAAAAAGAGC
CTGGTAGCCTTTAAGATCATGCCCTGGAGGATATGAATGAGTTCACCACACATATTCTGGAAGTATCA
ATGCACACATGGTACTAAGCAAAGCCAACAGCCAGCCCTCAGCAGGGAGAGCACCTATCAGCAATCCAGG
AATGAGTGAAGCAGGGAACCTTTGGTGGGAATAGCTTCAAGCAGCAATGGCCTCACTGTGGCCAAAAAC
CAGGTGTTGAATTTGATTAAGGCTTGTCCAAGACCTGAAGGGTTGAACTTTCAGGATCTCAAGAACCAGC
TGAACACATGTCTGTATCCTCAATCAAGCAAGCTGTGGATTTTCTGAGCAATGAGGGGCACATCTATTC
TACTGTGGATGATGACCATTTTAAATCCACAGATGCAGAA

AG**CGGACCG**ACGCGTACGCGGCCGCTCAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC
TGGATTACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC205715 protein sequence
 Red=Cloning site Green=Tags(s)

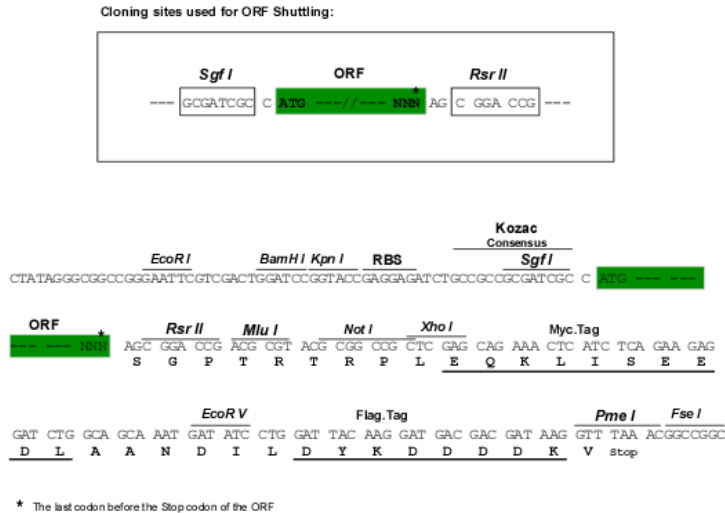
MWNSGFESYSSSYGGAGGYTQSPGGFGSPAPSQAEEKSRARAQHIVPCTISQLLSATLVDEVFRIGNVE
 ISQVTIVIGIIRHAEKAPTNIYVKIDDMTAAPMDVRQWVDTDDTSSENTVVPPEYVYKVGHLRSFQNKKS
 LVAFKIMPLEDMNEFTTHILEVINAHMVLKANSQPSAGRAPISNPGMSEAGNFGGNSFMPANGLTVAQN
 QVLNLIKACPRPEGLNFQDLKNQLKHMSVSSIKQAVDFLSNEGHIYSTVDDDDHFKSTDAE

SGP TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6189_d01.zip

Restriction Sites: SgfI-RsrII

Cloning Scheme:



ACCN: NM_002946

ORF Size: 810 bp

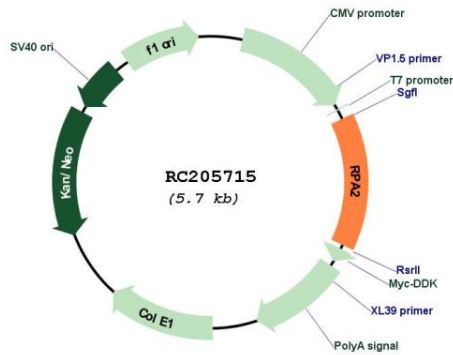
OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially 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.

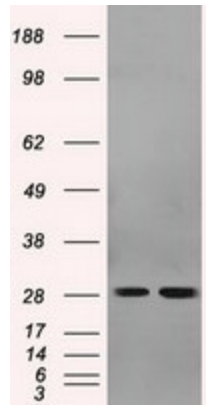
Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

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.
Note:	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
RefSeq:	NM_002946.5
RefSeq Size:	1819 bp
RefSeq ORF:	813 bp
Locus ID:	6118
UniProt ID:	P15927
Cytogenetics:	1p35.3
Domains:	tRNA_anti
Protein Families:	Druggable Genome, Stem cell - Pluripotency
Protein Pathways:	DNA replication, Homologous recombination, Mismatch repair, Nucleotide excision repair
MW:	29.2 kDa
Gene Summary:	<p>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]</p>

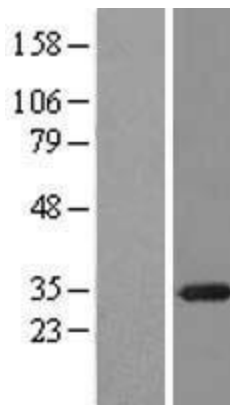
Product images:



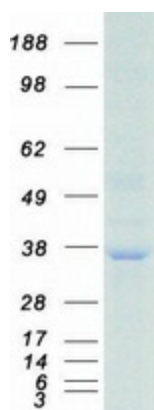
Circular map for RC205715



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY RPA2 (Cat# RC205715, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-RPA2 (Cat# [TA500763]). Positive lysates [LY401031] (100ug) and [LC401031] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY401031]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC205715 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified RPA2 protein (Cat# [TP305715]). The protein was produced from HEK293T cells transfected with RPA2 cDNA clone (Cat# RC205715) using MegaTran 2.0 (Cat# [TT210002]).