OriGene Technologies, Inc.
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
https://www.origene.com
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

Product datasheet for SC118291

RPA14 (RPA3) (NM_002947) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	RPA14 (RPA3) (NM_002947) Human Untagged Clone
Tag:	Tag Free
Symbol:	RPA14
Synonyms:	REPA3; RP-A p14
Mammalian Cell Selection:	None
Vector:	pCMV6-XL5
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>OriGene ORF sequence for NM_002947 edited ATGGTGGACATGATGGACTTGCCCAGGTCGCGCATCAACGCCGGCATGCTAGCTCAATTC ATCGACAAGCCTGTCTGCTTCGTAGGGAGGCTGGAAAAGATTCATCCCACCGGAAAAATG TTTATTCTTTCAGATGGAGAAGGAAAAAATGGAACCATCGAGTTGATGGAACCCCTTGAT GAAGAAATCTCTGGAATTGTGGAAGTGGTTGGAAGAGTAACCGCCAAGGCCACCATCTTG TGTACATCTTATGTCCAGTTTAAAGAAGATAGCCATCCTTTTGATCTTGGACTTTACAAT GAAGCTGTGAAAATTATCCATGACTTCCCTCAGTTTTATCCTTTAGGGATTGTGCAACAT GATTGA
5' Read Nucleotide Sequence:	>OriGene 5' read for NM_002947 unedited GGTTCAGAATTTGTATCCGACTCCTATAGGCGGCCGCGCAATTCGCACGAGGCCCGCCAG CCGCAGTCTTGGACCATAATCATGGTGGTACATGATGGACTTGCCCAGGTCGCGCATCAA CGCCGGCATGCTAGCTCAATTCATCGACAAGCCTGTCTGCTTCGTAGGGAGGCTGGAAAA GATTCATCCCACCGGAAAAAGTTTATTCTTTCAGATGGAGAAGGAAAAAATGGAACCATC GAGTTGATGGAACCCCTTGATGAAGAAATCTCTGGAATTGTGGAAGTGGTTGGAAGAGTA ACCGCCAAGGCCACCATCTTGTGTACATCTTATGTCCAGTTTAAAGAAGATAGCCATCCT TTTGATCTTGGACTTTACAATGAAGCTGTGAAAATTATCCATGACTTCCCTCAGTTTTAT CCTTTAGGGATTGTGCAACATGATTGATCTTGATGGATTTTCATACGATTGTAAATGAGC TATATTAAAGTCTATTAAAGGAAGCCCTTCTTGTTTGAGGGAGAGATTTCTGTGCTTTCT CATATTTAATTCGCTGTTTTTAAGATATTCCAACCTAGAGTTTTTGATGGAACTGATATA TTGACAGTTCTCACCGAAGTCCTTTTATAAAGAATTGCTACTCCAATATATGGCCAGATT AGATGCAAGAATAAAGCAGTTGTCCGAGTCTAAGTTTCTATTTTATTAATAAAAACTAAA ATGGTACGTACTATTGGTCATTTCATTTTCATTCTTTTAATCATGTATTCAAGCACAAAC TTGAAATTTCATAGCCATAAGGTCAAGAATTAGACCTACCAAATAAAACCTTGGGCCAGC TGTGTTAAAGATTTGTTCACCCTTTCCAACTATACCTTGAATTATTCCCTTGAACCCTAC TTACAAAAGAA
Restriction Sites:	NotI-NotI

View online »

ACCN:	NM_002947
Insert Size:	2260 bp
OTI Disclaimer:	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
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:	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.
RefSeq:	NM_002947.3, NP_002938.1
RefSeq Size:	1613 bp
RefSeq ORF:	366 bp
Locus ID:	6119
UniProt ID:	P35244
Cytogenetics:	7p21.3
Protein Families:	Druggable Genome, Stem cell - Pluripotency
Protein Pathways:	DNA replication, Homologous recombination, Mismatch repair, Nucleotide excision repair

Gene Summary: As part of the heterotrimeric replication protein A complex (RPA/RP-A), binds and stabilizes single-stranded DNA intermediates that form during DNA replication or upon DNA stress. It prevents their reannealing and in parallel, recruits and activates different proteins and complexes involved in DNA metabolism. Thereby, it plays an essential role both in DNA replication and the cellular response to DNA damage (PubMed:9430682). In the cellular response to DNA damage, the RPA complex controls DNA repair and DNA damage checkpoint activation. Through recruitment of ATRIP activates the ATR kinase a master regulator of the DNA damage response (PubMed:24332808). It is required for the recruitment of the DNA double-strand break repair factors RAD51 and RAD52 to chromatin, in response to DNA damage. Also recruits to sites of DNA damage proteins like XPA and XPG that are involved in nucleotide excision repair and is required for this mechanism of DNA repair (PubMed:7697716). Plays also a role in base excision repair (BER), probably through interaction with UNG (PubMed:9765279). Also recruits SMARCAL1/HARP, which is involved in replication fork restart, to sites of DNA damage. May also play a role in telomere maintenance. RPA3 has its own single-stranded DNA-binding activity and may be responsible for polarity of the binding of the complex to DNA (PubMed:19010961). As part of the alternative replication protein A complex, aRPA, binds single-stranded DNA and probably plays a role in DNA repair. Compared to the RPA2-containing, canonical RPA complex, may not support chromosomal DNA replication and cell cycle progression through S-phase. The aRPA may not promote efficient priming by DNA polymerase alpha but could support DNA synthesis by polymerase delta in presence of PCNA and replication factor C (RFC), the dual incision/excision reaction of nucleotide excision repair and RAD51-dependent strand exchange (PubMed:19996105).[UniProtKB/Swiss-Prot Function]