

Product datasheet for **MC220005**

Rpa1 (NM_001164223) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Rpa1 (NM_001164223) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Rpa1
Synonyms:	70kDa; 5031405K23Rik; AA589576; AW557552; RF-A; RP-A; Rpa
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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Fully Sequenced ORF: >MC220005 representing NM_001164223
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGTGGGACACCTGAGCGAGGGGGCCATCGAGGTCATGATACAGCAGGAAAATACATCCATAAAGCCCA
 TCCTGCAGGTCATTAACATCCGTCCCATTTCTACAGGGAATAGGTCACCCCGGTACCGACTGCTCATGAG
 TGATGGGTTGAACACGCTTTCCTCGTTCATGCTGGCCACGCAGCTGAACACCCTGGTCGAGGGAGGGCAG
 CTGGCCAGCAACTGTGTCTGCCAGGTCCACAAGTTCATCGTCAACACCCTGAAAGACGGCAGAATGCAAC
 CAAAACCTCATGGGAATCCGTATGGTGAACAGTCAGTGTGAGGAAGTTAAGCCAGAAAGTAGTTGTTTT
 GATGGACTTGGAAAGTTATGAAATCTGCTGAAGACGTTGGATTAAGATTGGGAATCCAGTGCCCTATAAT
 GAAGGATATGGGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAAGCAGTCCCTTCCCAGCCTCTG
 CAGCGACACCACCAGCCAGCAAGCCCCAGCCACAGAATGGGAGTCTGGGAATGGTTCCACTGCAGCTAA
 GGCTTATGGTGCCTCAAAGCCATTTGGAAAACCTGCCGGAAGTGGCTGTGCAGCCTTCAGGTGGGACA
 CAGTCCAAAGTGGTGCCTCGCCATCGCCAGCCTCACCCCGTACCAAGTGGACTATTTGTCCCCGTGTCA
 CCAACAAAAGTCAGATCCGCACCTGGAGTAATTCGGGGGGGAAGGAAAGCTTTTCTCTCTAGAAGTGT
 GGATGAAAGCGGTGAAATCAGAGCTACTGCTTTCAATGAGCAAGTGGACAAGTCTTTCCCTTATTGAA
 GTGAACAAGGTGTATTACTTCTCAAAGGGCGCCCTGAAGATCGCTAACAAACAGTTCTCCGCTGTTAAAA
 ATGACTATGAGATGACCTTCAATAATGAGACTTCTGTCCCTCCCTGTGAAGATGGCCATCACTTACCCAC
 AGTTCAAGTTGATTTACAGGGATCGGTGACCTAGAGAGCAAGGCTAAAGACGCACTAGTAGACATCATT
 GGAATCTGCAAGAGCTATGAAGATTCGATTAATAACACAGTGAAGTGAACAACAGAGAAGTTGCTAAGA
 GAAATATCTATTTGATGGACATGTCAGGGAAGGTGGTGACCACAACCTCTGTGGGAGAAGATGCTGACAA
 GTTTGACGGCTCTCGGCAGCCCGTATGGCCATCAAAGGAGCCCGAGTCTCTGACTTCGGTGGACGGAGC
 CTCTCGGTCTCTCATCCAGCACTGTCATTGTGAATCCTGACATCCCAGAGGCCTATAAGCTTCGTGGCT
 GGTTTGACTCAGAAGGACAAGCCTTAGATGGTGTTCATCTCTGACCACAGGAGTGGAGGGGCCGGAGG
 GGGCAACACCAACTGGAAAACCTTTCATGAGGCTAAATCTGAGAACCTGGGCCAGGGAGACAAGGCGGAC
 TATTTCAAGCACTGTGGCAGCGGTGGTGTTCCTCGCAAAGAGAAGTGTATGTACCAGGCCTGCCCAACCC
 AGGACTGCAATAAGAAAGTGATTGACCAGCAGAATGGGTTGTACCCTGTGAGAAGTGTACCAGGGAATT
 TCCCAATTTCAAATACCGCATGATCTTATCGGCAATATTGCAGATTTTCAAGAGAACCAGTGGGTGACG
 TGTTTCCAGGAGTCTGCAGAGGCCATCCTTGACAGAACTATGTACCTTGGGGAACCTCAAAGAGAAGA
 ACGAGCAGGCGTTTGAAGAGTTTTCCAGAATGCCAATTCGGGTCATTTACGTTTCAAGATCAGGGTCAA
 GCTGGAGACCTACAATGATGAATCTCGAATTAAGGCCACTGTGATGGACGTGAAGCCCGTGGACTTCAGA
 GACTATGGCAGACGGCTGATCGCGAACATCAGGAAGAACAT**GTGA**

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-MluI
ACCN: NM_001164223
Insert Size: 1935 bp

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](#)

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_001164223.1](#), [NP_001157695.1](#)

RefSeq Size: 3121 bp

RefSeq ORF: 1935 bp

Locus ID: 68275

UniProt ID: [Q8VEE4](#)

Cytogenetics: 11 45.79 cM

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. 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. 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. Plays also a role in base excision repair (BER) probably through interaction with UNG. Also recruits SMARCAL1/HARP, which is involved in replication fork restart, to sites of DNA damage. May also play a role in telomere maintenance.[UniProtKB/Swiss-Prot Function]

Transcript Variant: This variant (1) represents the longer transcript and encodes the longer isoform (1).