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 RC217994

POLR3G (NM_006467) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	POLR3G (NM_006467) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	POLR3G
Synonyms:	C31; RPC7; RPC32
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

ORF Nucleotide Sequence:

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>RC217994 representing NM_006467
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGCTGGGAATAAAGGAAGAGGACGTGCTGCTTATACCTTTAATATTGAGGCTGTTGGATTTAGCAAAG
GTGAAAAGTTACCTGATGTAGTGTTGAAACCACCCCCACTATTTCCTGATACAGATTATAAACCAGTGCC
ACTGAAAACAGGAGAAGGTGAAGAATATATGCTGGCTTTGAAACAGGAGTTGAGAGAAACAATGAAAAGA
ATGCCTTATTTTATTGAAACACCTGAAGAAAGACAAGATATTGAAAGGTATAGTAAAAGATACATGAAGG
TATACAAGGAAGAATGGATACCAGATTGGAGAAGACTTCCAAGAGAGATGATGCCAAGAAATAAATGTAA
AAAAGCAGGCCCAAAACCCAAAAAGGCAAAAGACGCAGGCAAAGGCACACCACTCACTAATACTGAAGAT
GTGTTGAAAAAAATGGAGGAATTGGAAAAAAGAGGTGATGGTGAAAAATCAGATGAGGAAAATGAAGAGA
AAGAAGGAAGCAAAGAGAAAAGTAAAGAAGGTGATGATGACGATGACGATGATGCCGCAGAACAGGAGGA
ATATGATGAAGAAGAGCAAGAAGAGGAAAATGACTACATTAATTCATACTTTGAAGATGGAGATGATTTT
GGCGCAGACAGTGATGACAACATGGATGAGGCAACCTAT

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA
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Protein Sequence:

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>RC217994 representing NM_006467
Red=Cloning site Green=Tags(s)

MAGNKGRGRAAYTFNIEAVGFSKGEKLPDVVLKPPPLFPDTDYKPVPLKTGEGEEYMLALKQELRETMKR
MPYFIETPEERQDIERYSKRYMKVYKEEWIPDWRRLPREMMPRNKCKKAGPKPKKAKDAGKGTPLTNTED
VLKKMEELEKRGDGEKSDEENEEKEGSKEKSKEGDDDDDDDAAEQEEYDEEEQEEENDYINSYFEDGDDF
GADSDDNMDEATY

TRTRPLEQKLISEEDLAANDILDYKDDDDKV
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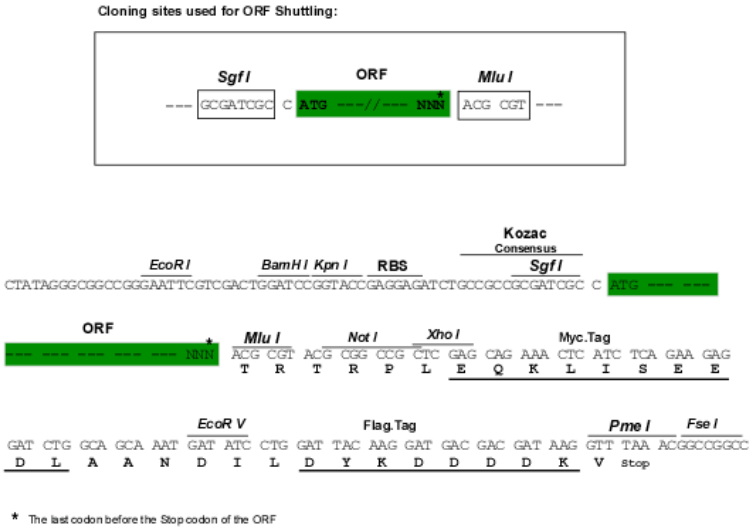
Chromatograms: https://cdn.origene.com/chromatograms/mk8016_e02.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_006467

ORF Size: 669 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

OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

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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.
Note:	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
RefSeq:	NM_006467.3
RefSeq Size:	1000 bp
RefSeq ORF:	672 bp
Locus ID:	10622
UniProt ID:	O15318
Cytogenetics:	5q14.3
Protein Pathways:	Cytosolic DNA-sensing pathway, Metabolic pathways, Purine metabolism, Pyrimidine metabolism, RNA polymerase
MW:	25.7 kDa
Gene Summary:	DNA-dependent RNA polymerase catalyzes the transcription of DNA into RNA using the four ribonucleoside triphosphates as substrates. Specific peripheric component of RNA polymerase III which synthesizes small RNAs, such as 5S rRNA and tRNAs (PubMed:20154270). May direct with other members of the RPC3/POLR3C-RPC6/POLR3F-RPC7/POLR3G subcomplex RNA Pol III binding to the TFIIIB-DNA complex via the interactions between TFIIIB and POLR3F. May be involved either in the recruitment and stabilization of the subcomplex within RNA polymerase III, or in stimulating catalytic functions of other subunits during initiation. Plays a key role in sensing and limiting infection by intracellular bacteria and DNA viruses. Acts as nuclear and cytosolic DNA sensor involved in innate immune response. Can sense non-self dsDNA that serves as template for transcription into dsRNA. The non-self RNA polymerase III transcripts, such as Epstein-Barr virus-encoded RNAs (EBERs), induce type I interferon and NF- Kappa-B through the RIG-I pathway (PubMed:19609254, PubMed:19631370).[UniProtKB/Swiss-Prot Function]

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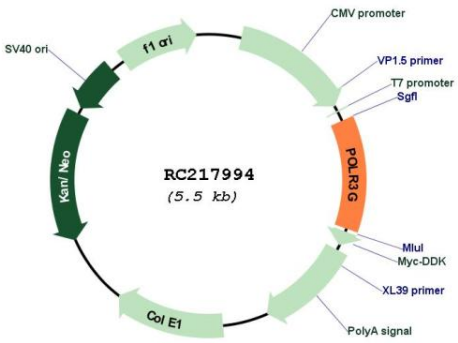
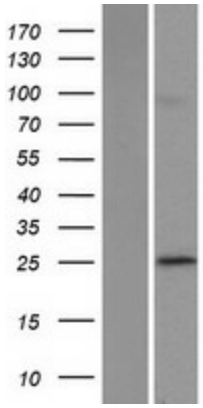
Product images:



Circular map for RC217994



Western blot validation of overexpression lysate (Cat# [LY416626]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC217994 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).

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