

Product datasheet for **RC200279**

RPC62 (POLR3C) (NM_006468) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	RPC62 (POLR3C) (NM_006468) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	RPC62
Synonyms:	C82; RPC3; RPC62
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC200279 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGACTCAAGCAGAAATTAAGCTCTGTTCTTTGTTGCTGCAAGAGCATTGGAGAGATTGTAGAAAAA
 TTGGAGTCCATCTGATAAGAACCGCAGCCAGCCACTAAGAGTAATTGCCATGACACAGGAACATCACT
 GGATCAGGTGAAGAAAGCCCTGTGTCTCGTCCAACATAACCTGGTGAGTTATCAAGTGCACAAACGT
 GGTGTGGTGGAGTATGAAGCCAGTGCAGCCGGTATTGCGAATGCTTAGATATCCCGGTACATCTATA
 CTACAAAACCTGTACAGTGACACTGGAGAGCTGATTGTTGAGGAGCTTCTGTTGAACGGCAAACCTGAC
 AATGTCAGCTGTTGTGAAGAAAGTGGCAGACCGGCTCACAGAGACCATGGAGGATGGCAAGACCATGGAC
 TATGCTGAAGTATCAAACACATTTGTGCGACTGGCAGACACACTTTGTACAACGCTGCCCTTCGGTAC
 CTACCACTGAGAATTCAGACCTGGGCCACCACCCTGCCCCACACTTGTCTTAATGAAAAGGACAT
 GTACCTGGTTCCTAAACTCAGCTTGATAGGAAAGGTAAGGAGGAGATCATCTGATGAAGATGCTGCT
 GGGGAGCCCAAGGCCAAGAGACCAAAATACTACAGATAACAAGGAGCCATTCCAGATGATGGGATTT
 ATTGGCAGGCCAACCTTGACAGATTCACCAACACTTCCGTGACCAAGCCATTGTGAGCGCAGTTGCTAA
 CAGGATGGACCAGACAAGCAGCGAGATTGTGCGAACCATGCTCCGAATGAGTGAGATTACCACTTCTCT
 AGTGCTCCCTTACCCAGCCATTGTCTTCCAATGAGATCTTCAGATCCCTACCTGTTGGCTATAACATCT
 CTAAGCAAGTCTTGTATCAGTATCTCACTCTGCTGGCAGATGATCCACTAGAGTTTGTGGAAAGTCTGG
 CGACAGTGGTGGAGGAATGTATGTCATCAACCTCCATAAGGCATTAGCATCCCTAGCCACAGCCACTCTG
 GAGTCCGTCGTACAGGAGAGATTTGGTCTCGCTGTGCTAGAATATCCGTCTAGTTTTCGAGAAGAAAC
 ACATAGAGCAGAAGCAAGTGAAGACTTTGCAATGATTCTGCAAGGAGGCAAGGATATGCTATATAA
 GATGCTCTCAGAAAATTCATGTCACTCCAGGAAATCCCAAAACACCAGACCATGCCCATCCAGGACC
 TTCTATTTATATACTGTGAACATCCTGTGAGCTGCCGAATGTTGTTGCACAGGTGCTACAAGAGCATAG
 CCAACTTGATAGAAAGGAGGCAATTTGAAACCAAGAGAATAAGCGTCTACTAGAAAAATCTCAGAGGGT
 AGAAGCCATCATTGCATCTATGCAGGCTACTGGTGCAGAGGAAGCACAGTTACAAGAAAATAGAGGAGATG
 ATCACAGTCTGAACGTCAGCAGCTAGAGACCCTGAAACGTAATGTCAACAAGTTGGATGCCAGTGAGA
 TCCAGGTGGACGAAACCATCTTCTGCTGGAGTCTTACATTGAGTGCACCATGAAGAGACAG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC200279 protein sequence
 Red=Cloning site Green=Tags(s)

MTQAEIKLCSLLLQEHFGEIVEKIGVHLIRTGSQPLRVI AHDGTSLDQVKKALCVLVQHNLVSYQVHKR
 GVVEYEAQCSRVLRMLRYPRIYITTKTLYSDTGELIVEELLLNGKLTMSAVVKKVADRLTETMEDGKTMD
 YAEVSNTFVRLADTHFVQRCPSPVPTTENSPPPPAPTLVINEKDMYLVPKLSLIGKGRRRSSDEDA
 GEPKAKRPKYTTDNKEIPDDGIYWQANLDRFHQHRDQAIVSAVANRMDQTSSEIVRMLRMSEITTS
 SAPFTQPLSSNEIFRSLPVGYNISQVLDQYL TLLADDPLEFVGKSGDSGGMYVINLHKALASLATATL
 ESVVQERFGSRCARIFRLVLQKKHIEQKQVEDFAMIPAKEAKDMLYKMLSENFMSLQEIPTPDHAPSRT
 FYLYTVNILSAARMLLHRCYKSIAANLIERRQFETKENKRLLEKSQRVEAIIASMQATGAEEAQLQEIEEM
 ITAPERQQLLETLRNVNKLDASEIQVDETFLLLESYIECTMKRQ

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk6177_a06.zip

Restriction Sites:

Sgfl-MluI

Cloning Scheme:


ACCN: NM_006468

ORF Size: 1602 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:**
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_006468.8](#)

RefSeq Size: 1888 bp

RefSeq ORF: 1605 bp

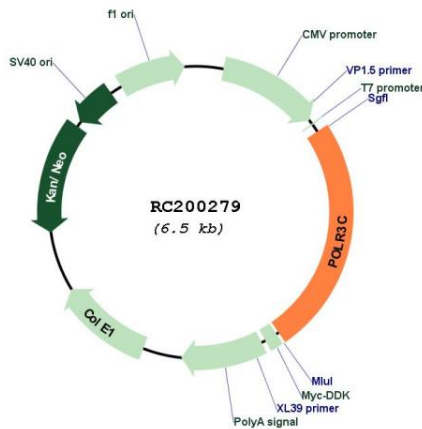
Locus ID: 10623

UniProt ID: [Q9BUI4](#)

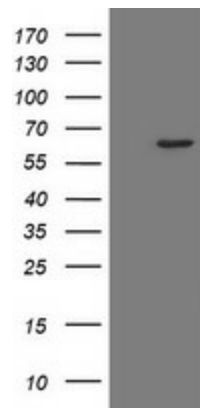
Cytogenetics: 1q21.1

Protein Families:	Transcription Factors
Protein Pathways:	Cytosolic DNA-sensing pathway, Metabolic pathways, Purine metabolism, Pyrimidine metabolism, RNA polymerase
MW:	60.6 kDa
Gene Summary:	DNA-dependent RNA polymerase catalyzes the transcription of DNA into RNA using the four ribonucleoside triphosphates as substrates. Specific core component of RNA polymerase III which synthesizes small RNAs, such as 5S rRNA and tRNAs. May direct with other members of the subcomplex RNA Pol III binding to the TFIIB-DNA complex via the interactions between TFIIB 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. Preferentially binds single-stranded DNA (ssDNA) in a sequence-independent manner (PubMed:21358628).[UniProtKB/Swiss-Prot Function]

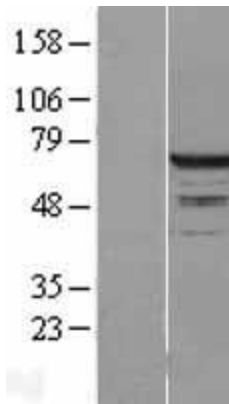
Product images:



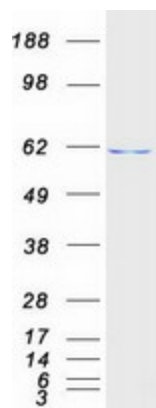
Circular map for RC200279



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY POLR3C (Cat# RC200279, 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-POLR3C (Cat# [TA505106]). Positive lysates [LY401943] (100ug) and [LC401943] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY401943]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC200279 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified POLR3C protein (Cat# [TP300279]). The protein was produced from HEK293T cells transfected with POLR3C cDNA clone (Cat# RC200279) using MegaTran 2.0 (Cat# [TT210002]).