

Product datasheet for **MG212069**

Polr1a (NM_009088) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Polr1a (NM_009088) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Polr1a
Synonyms:	194kDa; 3010014K16Rik; mRPA1; RPA194; Rpo1-4
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>MG212069 representing NM_009088 Red=Cloning site Blue=ORF Green=Tags(s)

GACGTTGTATACGACTCCTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCCGCCGGCGGCC

ATGCTGGCCTCCAAGCACACACCATGGAGGCGGCTTCAGGGCATTTCCTTCGGAATGTATTCGGCCGAAG
AGCTCAAGAAAGTTAAGTGTAAATCCATTACAAATCCTCGATACGTGGACTACCTGGAAACCCCTCAGC
AAATGGCCTGTATGATTGGCTTTGGGTCCTGCAGATTCCAAAGAAGTATGCGCTACCTGCTGCAGGAC
TTCAACAACCTGCTCTGGACACCTGGGCCACATTGATCTCCGCTCACAGTCTACAACCCCTTCCTCTTTG
ATAAACTACCTGCTGCTTCGAGGCTCCTGTTTGAGTTGCCACATGCTGACTTGTCTCGGGCTGCAAT
TTACCTGTTGATCTCCAGCTGAGGGTCTGGAAGTTGGAGCCCTGCAAGCAGTCTACGAGCTTGAGCGA
ATTCTCAGCAGGTTTCTGGAAGAACTGGAGATCCTCCGCCCTCGAAATTCAGAAAGAGTTAGAAGAAT
ACACAAGCAAAATTCGAGAACAACCTCTGGGGTCCCAGGGCACACATGTGAAAAATGTGTGCGAGAG
CAGAAGCAAACTGTGCGCTCAGTTCTGGAAGACACACATGGCTGCGAAGCAGTGTCCACACTGCAAGACG
GGACGGTCCGGTGGTTCGAAAGGAGCACAATAGTAACTAATCATCACATACCCAGCCACGGTGCACAAGA
AATCAGACCAGGAGGGCACAGAACTCCCAGAAGGAGTGCCGAAGCTCCAGGAATTGACAAGGCTCAGAT
GGGGAACGAGGGTACCTGACCCCAAGCAGCGCCCAAGAACACCTTTTCGCCATTTGGAAGAATGAAGGA
TTCTTTCTGAATTATCTTTTTTCGGGATTGGATGATATTGGCCAGAGTCCAGTTTCAACCCAGTATGT
TCTTTCTAGACTTCATAGTCGTACCGCCATCCAGGTACCGTCCCGTCAATCGCCTGGGTGACCAGATGTT
CACTAATGGCCAGACAGTAACTTGCAAGCTGTACATGAAGGATGACAGTTTGTATCCGGAAACTTCTGGCG
TTGATGGCCCAAGAACAGAACTGCCCTGTGAGATGACAGAACTCACCATAGACAAGGAAAATGACTCCT
CAGTGGCTATCGACCGATCCTTCTGGGTTTGCTTCCAGGCCGCTCTCACAGATAAACTTTACAACAT
TTGATTTCGCTTCAGAGCCACGTCAATATTGTGTTTGACAGTGTGAGTGGACAAATTGATGTTGGAAAAG
TACCCTGGCATAAGACAGATCCTAGAGAAGAAGGAAGGCTGTTCCGGAAGCACATGATGGGAAAGCGAG
TTGACTACGACGCCGCTCGGTCTCTGCCAGACATGTACATCAACACCAATGAGATCGGAATCCCAT
GGTATTTGCCACAAAACCTGACTTACCCTCAGCCAGTTACCCCTGGAACGTGCAGGAACTGAGACAGGCA



[View online »](#)

GTCATCAATGGACCCAATGTGCACCCAGGAGCCTCCATGGTCATCAACGAGGATGGCAGTCGCACAGCCC
 TGAGCTCAGTGGATGCTGCGCAGCGGGAAGCTGTGGCCAAACAGCTCCTGACACCAGCCACAGGGGCTCC
 GAAGCCTCAGGGGACAAAAGTTGTGTGCCGGCATGTGAAAAATGGGGACATCCTCCTCTGAACCGACAG
 CCTACCTTGACACAGACCTCCATCCAGGCCACCGTGCCCGCATTCTGCCTGAAGAAAAAGTCTACGCC
 TACTATGCCAACTGCAAGGCCTACAATGCTGACTTTGATGGAGATGAGATGAACGCCCACTTCCCCCA
 GAGTGAGTTGGGCCGAGCTGAAGCCTATGCTGCCTGCCTGCCTGATCAGCAGTATCTTGTCCCAAGGAT
 GGCCAGCATTGGCAGGACTGATCCAAGATCACATGGTTTCAGGTGCAAAACATGACCATTGCGGGATGCT
 TTTTCACCCGGGAACAGTACATGGAACCTGGTGTACCGAGGGCTCACAGACAAAGTGGGACCGTGAAGCT
 CTTTCCTCCCGCCATCCTGAAGCCCTTCCCACTGTGGACAGGAAAAACAGTTGTGTGACCCCTCCTCATA
 AACATAATTCCAGAGGACTACGCCCCCTGAACTTATCTGAAAGGCCAAAAATTGGCAGCAAAGCCTGGG
 TGAAGGAAAAGCCACGGCCTATCCCTGACTTTGACCCGGACTCCATGTGTGAGTCCAGGTGATCATCAG
 GGAAGGAGAGCTGCTCTGCGGAGTGTGGACAAGGCACACTATGGGAGCTCTGCCTACGGCCTGTCAC
 TGCTGCTATGAGATCTATGGGGTGAGACCAGCGGAGGGTTCTACCTGCCTAGCCCGCTTCTACTG
 CCTACCTCAGCTCTATAGAGGTTTACCTTGGGTGTAGAAGACATTTTGGTTAAGCCAAATGCAGATGT
 GGTGAGACAGCGTATCATTGAAGAATCTACCCAGTGTGGACCCAGGCTGTCAAGGCTGCATTGAGCCTG
 CCAGAAACTGCATCATGTGATGAAATCCAAGGAAATGGCAGGATGCCCATCTGAGCAAAGACCAGAGGG
 ATTTTAACATGATTGATATGAAGTTCAAGGAGGAAGTGAACCATTACAGCAATGAGATTAACAAGGCATG
 TATGCCTCTTGGCTTGCACAGACAGTTCCCCGAAAAACAACCTGCAGATGATGGTGCAGTCAGGAGCCAAA
 GGGTCAACCGTGAACACGATGCAAACTCTTGCCTGCTGGGCCAAATTGAATTGGAAGGTGCGGAGACCC
 CACTGATGGCGTCTGGCAAGTCACTGCCCTGCTTTGAGCCTTACGAGTTCACCCCGAGGGCTGGTGGCTT
 TGTCACTGGAAGGTTTCTTACCGGTATCAGGCCCTGAGTTCCTTCCACTGCATGGCAGGACGAGAA
 GGCCTGGTGGACACTGCTGTCAAACCAGCCGTTCTGGCTATCTCAAAGGTGTATCATCAAGCACTGG
 AGGGCTGGTCAATCCAGTACGATCTGACGGTCCGTGACAGCGTGGCAGCGTGGTCCAGTCTCTGATGG
 GGAGGACCGCCTGGACATCCCAAGACAGTTCCTACAGCCCAAGCAGTTCCCTTTCTGCGCGCAAT
 TATGAGGTGATAATGAAATCCAAGCATCTTCATGAAGTTTTATCCAGAGCAGATCCCCAGAAAGTCTCG
 GCCACATCAAAGCCATTAATAAATGGCATCACAAGCATTCCGGTGCCTGCTGAGGAAAGGCGCCTTCT
 CAGTTTTTCCAGAAGATCCAGGCAGCTGTGAAAGCTTTGAACTAAAGGGCAGTATCCAGAATGGCCG
 AGCCCCGAGACCCAGCAGATGTTACAGATGTGGTATGACTTGGATGAAGAGAGCCGATGGAATACCAGA
 AGAGGGCTGCCCTTGTCCCGACCCTAGCCTTCTGTGTGGCGCCAGACATCTACTTTGCATCTGTGTC
 TGAACATTTGAAAAGAAGATTGATGACTTCAGTCAGGAATGGGCAGCTCAAGCAGAGAGGAGTTACAAG
 AAATCAGAGCTTCCCTCGACAGGCTGAGAACCCTACTGCAGCTGAAGTGGCAGCGCTCACTGTGTGACC
 CAGGGCAGGCTGTTGGCCTCCTGCTGCCAGAGCATCGGAGAGCCCTCCACACAGATGACACTGAACAC
 CTTCCACTTTGCAGGCAGAGGCGAGATGAACGTACCCTGGGCATTCCAAGATTGAGGGAGATTCTCATG
 GTGGCCAGTGCCAACATCAAACGCCCATGATGAGTGTGCCTGTGTTTCGACACCAAGAAAGCATTGAAGA
 AAGTGAAGAGTCTAAAGAAGAGGCTCACCAGAGTGTGCCTGGGGGAGGATTGACAGAAAGTTGACATCCA
 GGAGTCTTCTGTATGGGAGAAAAACGGAATAAGTTCAGGTGTATGAGTCCGGTTTTCAGTTCTCGCCA
 CATGCATATTACCAGCAGGAGAAGTGCCTGAGACCCGAGGACATCTTGCATTTCATGGAACCAGATTCT
 TTAAGTACTAATGGAAGCTATCAAAAAGAAGAAAAACAAGCATCAGCCTTTCAGAAATGGAATTCGAG
 GAGAGCTACACAGAAGGACCTCAATGACACTGAGGACTCGGGGAGGAGTCAGAGAGAGGAGAAAGGGAT
 GAGGAAGAGGAGGGAACATTGGATGCTGAAGCTGAGGAGGGCGATGCAGACGCTTTCGACACCAAAC
 GCAAGGAGAAGCAAGAAGAAGAGGTTGACTATGAGAGTGAAGGAAGGAGAGGAGGAAGAGGAGGAGGA
 GGTACAAGAAGAAGGGAACATCAAAGGCGACGGTGTCCACCAGGGCCATGAGCCAGATGAGGAAGAACAT
 TTAGGCCTCGAGGAGGAGGATCATCCAGAAGCCTCCCCGCGCCACTCCAGGCCTCAGGGAGCTGAGG
 CCATAAAACGCCGGATCCAGGCTGTACGGGAGTCTACTCGTTTCATCGAGGACTACCAGTATGACACAGA
 GGAGAGCCTGTGGTGTGAGGTGACTGTGAAGCTCCCACTGATGAAGATTAATTTTGCATGAGCTCCTTG
 GTTGTGCTCTGGCCACAAAGCCATTGTCTATACGACCAAGGGCATCACTCGGTGCCTCCTGAACGAAA
 CGACCAACAGTAAGAATGAGAAGGAGCTTGTACTGAACACGGAGGAATCAACCTTCCCGAGCTGTTCAA
 GTACTCCGAGATACTGGACCTGCGCCGCTTACTCCAATGACATCCACGCCATGGCCAATACTTATGGC
 ATCGAGGCTGCGTTGCGGGTATAGAGAAGGAGATTAAGATGTGTTTGTGTGTATGGCATTGCAGTTG
 ATCCTCGCATCTCTCCCTGGTGGCTGATTACATGTGTTTTGAGGGGTTTATAAGCCACTCAATCGCTT
 TGGGATCCAGTCAAGCTCCTCCCTTTGCAGCAGATGACATTTGAAACCAGCTTCCAGTTTCTGAAACAG
 GCCACCATGATGGGATCCCATGATGAACTCAAGTCACTTCCGCCTGCCTCGTGGTGGGAAAGGTTGTCA

AAGGCGGGACAGGCCTGTTTGAGCTCAAGCAGCCCTAAGA

ACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>MG212069 representing NM_009088

Red=Cloning site Green=Tags(s)

MLASKHTPWRLQGISFGMYSAEELKKLSVKSITNPRYVDYLGNPSSANGLYDLALGPADSKEVCATCVQD
 FNNCSGHLGHIDLPLTVYNPFLFDKLYLLLRGSCLSCHMLTCPRAAIYLLISQLRVLEVGAQAVYELER
 ILSRFLEETGDPSAFEIQEELYYTSKILQNNLLGSGQTHVKNVCESTRSKLVAQFWKTHMAAQCPHCKT
 GRSVVRKEHNSKLIITYPATVHKKSDQEGTELPEGVPEAPGIDKAMGKRGYLPSSAQEHLFAIWKNEG
 FFLNYLFSGLDDIGPESSFNPSMFFLDFIVVPPSRYPVNRLDQMFTNGQTVNLQAVMKDAVLRKLLA
 LMAQEQKLPCEMTELTIDKENDSSVAIDRSFGLLPGPSLTDKLYNIWIRLQSHVNI VFDSEMDKLMLEK
 YPGIRQILEKKEGLFRKHMMGKRVDYAARSVICPDMYINTNEIGIPMVFATKLTYPQVTPWNVQELRQA
 VINGPNVHPGASMVINEDGSRALSSVDAQREAVAKQLLTPATGAPKPGTKVVCRHVKNGDILLNRQ
 PTLHRPSIQAHRARILPEEKVLRHLHYANCKAYNADFDGDEMNAHFQSELGRAEAYVLACTDQQYLVPKD
 GQPLAGLIQDHMVSANMTIRGCFFTREQYMELVYRGLTDKVGKRVKLPFAILKPFPLWTGKQVVSTLLI
 NIIPEDYAPLNLGKAKIGSKAWVKEKPRPIPDPDPSMCEQVI IREGELLCGVLDKAHYGSSAYGLVH
 CCYEIYGGETSGRVL TCLARLFTAYLQLYRGFTLGVEDILVKPNADVVRQRIIEESTQCGPQAVKAALSL
 PETASCDEIQGKWQDAHL SKDQRDFNMIDMKFKEEVNHSNEINKACMPLGLHRQFPENNLQMMVQSGAK
 GSTVNTMQISCLLQIIELEGRPPPLMASGKSLPCFEPYEFTPRAGGFVTGRFLT GIRPPEFFHFCMAGRE
 GLVDTAVKTSRSGYLQRCIIKHLEGLVIQYDLTVRSDGSSVVQFLYGEDGLDIPKTQFLQPKQFPFLAGN
 YEYIMKSKHLHEVLSRADPQKVLGHIAIKKWHHKHSGALLRKGAFLSFSQKIQAQAVKALNLKGSIQNGR
 SPETQMLQMWDLDEESRWKYQKRAAPCPDPSLSVWRPDIYFASVSETFEKKIDDFSQEWAAQAERSYK
 KSELSLDRLRLLQLKWQRSLCDPGEAVGLLAAQSIGEPSTQMTLNTFFHFRGEMNVTLGIPRLREILM
 VASANIKTPMMSVPVFDTKKALKKVKSLKKRLTRVCLGEVLQKVDIQESFCMGEKRNKFQVYELRFQFLP
 HAYYQEQEKLRPEDILHFMETRFKLLMEAIKKNKASAFRNVNSRRATQKDLNDTEDSGRSQREEERD
 EEEEGNIVDAEAEEGDADASDTKRKEKQEEVDYSEEEEEEEEEVEEGNIKGDGVHQGHEPDEEEH
 LGLEEEESSQKPPRRHSRPOGAEAIKRRIQAVRESYSFIEDYQYDTEESLWCQVTVKLPMLKINFDMSL
 VVSLAHKAIIVYTTKGITRCLLNETTNSKNEKELVLNTEGINLPELKYSEILDRLRYSNDIHAMANTYG
 IEAALRVEIEKIDVFAVYGIADVPRHLSLVADYMCFEGVYKPLNRFGIQSSSSPLQQMTFETSFQFLKQ
 ATMMGSHDELKSPSACL VVGKVVKGGTGLFELKQPLR

TRPLE - GFP Tag - V

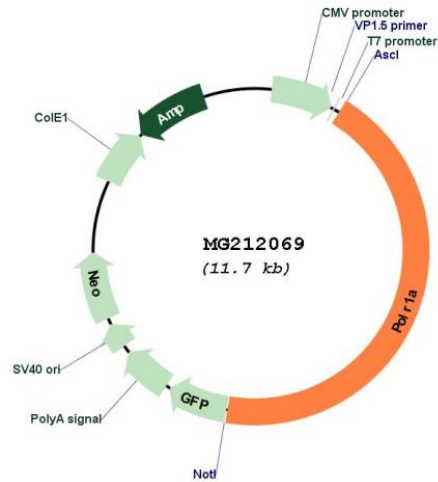
Restriction Sites:

Ascl-NotI

Cloning Scheme:

□

Plasmid Map:



ACCN: NM_009088

ORF Size: 5151 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_009088.3](#), [NP_033114.3](#)

RefSeq Size: 6145 bp

RefSeq ORF: 5154 bp

Locus ID: 20019

UniProt ID: [O35134](#)

Cytogenetics: 6 32.21 cM

Gene Summary: DNA-dependent RNA polymerase catalyzes the transcription of DNA into RNA using the four ribonucleoside triphosphates as substrates. Largest and catalytic core component of RNA polymerase I which synthesizes ribosomal RNA precursors. Forms the polymerase active center together with the second largest subunit. A single stranded DNA template strand of the promoter is positioned within the central active site cleft of Pol I. A bridging helix emanates from RPA1 and crosses the cleft near the catalytic site and is thought to promote translocation of Pol I by acting as a ratchet that moves the RNA-DNA hybrid through the active site by switching from straight to bent conformations at each step of nucleotide addition (By similarity).[UniProtKB/Swiss-Prot Function]