

Product datasheet for **RG201238**

POLD1 (NM_002691) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	POLD1 (NM_002691) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	POLD1
Synonyms:	CDC2; CRCS10; MDPL; POLD
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG201238 representing NM_002691 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGATGGCAAGCGGGCCAGGCCAGGGCCCGGGTGCSCCAAGCGGGCCCGTGGGGCCTCTGGG
ATGATGATGATGCACCTCGGCCATCCCAATTCGAGGAGGACCTGGCACTGATGGAGGAGATGGAGGCAGA
ACACAGGCTGCAGGAGCAGGAGGAGGAGGAGTGCAGTCAGTCTGGAGGGGTTGCAGACGGGCAGGTC
CCACCATCAGCCATAGATCCTCGCTGGCTTCGGCCACACCACCGCTGGACCCAGACAGAGCCCC
TCATCTTCCAACAGTTGGAGATTGACCATTATGTGGGCCAGCACAGCCTGTGCCTGGGGGCCCCACC
ATCCCACGGCTCCGTGCCTGTGCTCCGCGCCTTCGGGGTACCGATGAGGGGTTCTGTCTGTGCCAC
ATCCACGGCTTCGCTCCCTACTTCTACACCCAGCGCCCTGGTTTCGGGCCGAGCACATGGGTGACC
TGCAACGGGAGCTGAACTTGCCATCAGCCGGGACAGTCGCGGGGGAGGGAGCTGACTGGGCCGGCCGT
GCTGGCTGTGGAAGTGTGCTCCCGAGAGAGCATGTTTGGGTACCACGGGCACGGCCCTCCCGTTCCCTG
CGCATCACCGTGGCGCTGCCGCGCTCGTGGCCCCGGCCCGCTCTCCTGGAACAGGGCATCCGTGTGG
CAGGCTGGGCACGCCAGCTTCGCGCCCTACGAGGCCAACGTCGACTTTGAGATCCGGTTCATGGTGGA
CACGGACATCGTCGGCTGCAACTGGCTGGAGCTCCAGCTGGGAAATACGCCCTGAGGCTGAAGGAGAAG
GCTACGCAGTCCAGCTGGAGGGGACGTGCTGTGGTCTGACGTGGTCACTCAGGACCCAGGAGGGCCAT
GGCAGCGCATTGCGCCCTTGCCTGCTCAGCTTCGATATCGAGTGCGCCGGCCGAAAGGCATCTTCCC
TGAGCCTGAGCGGGACCTGTATCCAGATCTGCTCGCTGGGCCTGCGCTGGGGGAGCCGAGCCCTTC
CTACGCTGGCGCTCACCTGCGCCCTGTGCCCCATCCTGGGTGCCAAGGTGCAGAGCTACGAGAAGG
AGGAGGACCTGCTGCAGGCTGGTCCACCTTATCCGATCATGGACCCGACGTGATCACCGTTACAA
CATCCAGAACTTCGACCTTCCGTACCTCATCTCTCGGGCCAGACCTCAAGGTACAAACATTCCCTTTC
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GGGACACCAAGGTTGTCAGCATGGTGGCCGCGTGCAGATGGACATGCTGCAGGTGCTGCTCGGGAGTA
CAAGCTCCGCTCCTACAGCTCAATGCCGTGAGCTTCCACTTCTGGGCGAGCAGAAGGAGGACGTGCAG



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CACAGCATCATCACCGACCTGCAGAATGGGAACGACCAGACCCGCCGCCCTGGCTGTGTACTGCCTGA
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 GACCCCGGAGTGCGCCAGCCTGGGCGACCGCTCCCTACGTGATCATCAGTCCGCCAAGGGTGTGG
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 GGGACTGCCCCATCTTCTACATGCGCAAGAAGGTGCGGAAGGACCTGGAAGACCAGGAGCAGCTCTGCG
 GCGCTTCGGACCCCTGGACCTGAGGCCTGG

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>RG201238 representing NM_002691
 Red=Cloning site Green=Tags(s)

MDGKRRPGPGVPPKRARGGLWDDDDAPRPSQFEEDLALMEEMAEHRLQEQQEEELQSVLEGVADGQV
 PPSAIDPRWLRPTPALDPQTEPLIFQQLEIDHYVGAQPVPVGGPPPSHGSVPVLRVAFVGTDEGFSVCC
 IHGFAPYFYTPAPPFGPEHMGDLQRELNLAISRDSRGGRELTPAVLAVELCSRESMFYHGHGSPFL
 RITVALPRLVAPARRLLEQGIRVAGLGTSPFAPYEANVDFEIRFMVDTDIVGCNWLELPAGKYALRLKEK
 ATQCQLEADVLSWVSHPPPEGPWQRIAPLRVLSFDIECAGRKGIFPEPERDPVIQICSLGLRWGEPEPF
 LRLALTLRPCAPILGAKVQSYEKEDLLQAWSTFIRIMDPDVTITGYNIQNFDLPYLI SRAQTLKVQTFPF
 LGRVAGLCSNIRDSSFQSKQTGRDRTKVVMVGRVQMDMLQVLLREYKLSYTLNAVSVFHFHLEGEQKEDVQ
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 RQAMHEGLLMPVVKSEGGEDYTGATVIEPLKGYDVPIATLDFSSLYPSIMMAHNLCTYTLRPGTAQKL
 GLTEDQFIRTPGTDFVKTSVRKGLLPQILENLLSARKRAKAEAKETDPLRRQVLDGRQLALKVANSV
 YGFTGAQVGLPCLEISQSVTFGRQMIEKTKQLVESKYTVENGYSTSAKVYVGDTSVMCRFGVSSVAE
 AMALGREAADWVSGHFSPIRLEFEKVYFPYLLISKKRYAGLLFSSRPDAHDRMDCKGLEAVRRDNCPLV
 ANLVTASLRRLIDRDPEGAVAHAQDVIDLNCNRIDISQLVITKELTRAASDYAGKQAHVELAERMRKR
 DPGSAPSLGDRVPYVIIISAAGVAAYMKSEDPLFVLEHSLPIDTYYLEQQLAKPLLRIFEPILGEGRAE
 AVLLRGDHTRCKTVLTGKVGGLLAFARRNCCIGCRTVLSHQGAVCFQCQPRESELYQKEVSHLNALEER
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TRTRPLE - GFP Tag - V

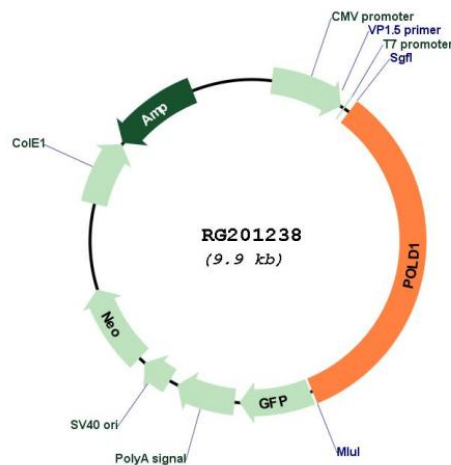
Restriction Sites:

Sgfl-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM_002691

ORF Size: 3321 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:	<ol style="list-style-type: none">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:	<u>NM_002691.1, NP_002682.1</u>
RefSeq Size:	3443 bp
RefSeq ORF:	3324 bp
Locus ID:	5424
UniProt ID:	<u>P28340</u>
Cytogenetics:	19q13.33
Domains:	DNA_pol_B_exo, DNA_pol_B, POLBc
Protein Families:	Druggable Genome, Stem cell - Pluripotency
Protein Pathways:	Base excision repair, DNA replication, Homologous recombination, Metabolic pathways, Mismatch repair, Nucleotide excision repair, Purine metabolism, Pyrimidine metabolism
Gene Summary:	This gene encodes the 125-kDa catalytic subunit of DNA polymerase delta. DNA polymerase delta possesses both polymerase and 3' to 5' exonuclease activity and plays a critical role in DNA replication and repair. Alternatively spliced transcript variants have been observed for this gene, and a pseudogene of this gene is located on the long arm of chromosome 6. [provided by RefSeq, Mar 2012]