

Product datasheet for **MC229041**

Poln (NM_001289803) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Poln (NM_001289803) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Poln
Synonyms:	POL4P
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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Fully Sequenced ORF: >MC229041 representing NM_001289803
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGC**

ATGAAATGGAAATTATGAGGCATGTGTAGGTTTGTCTGTGAGATACCCCTCTCTGCTGTTGCTC
 AGAAGATTATGTCTGCTATGCGTTCAGGTGATTTTCATGGATTCTAGGAATGAGGGAGAGAGTACAAACAC
 TTCAAAAGTGCCAAAGAAATCCAGTGTTCACTACTCAGTATTAGCTGAACATGAGGAGACTCAATCACTA
 GGAACAAAGAACCCGAGTCATTAATAACCCAGACACCAAGAGGATCCATTGAGCTCTGCTCTCAGCCCT
 CCATTACTAAGCTCACATGTGAGCTCTCTGCTGGTCAAGTACAGAACAGCATCAGCTCATTGGGTCTTTC
 CAGTTATTTAATCCACAGTGTGATCAGGAAGCTTCAGTTTTACCGAACATGGAGCATAAGAGACAGCAT
 TTCCTAAAGGAAATATAGGCAAGAAGATAAGGACAACCTCGAGCTTAAAGAAATATATTACATGTA
 GTAAATCCTCAGAAAAAGCAAGTAAACACACAGCTCTGAAAAAGATACTGATGGGACTGAATCCTGGCC
 AAATCCAGGGACACAAGAGCTTTGGGGAAAGGCTGTGTGATGTTAGATATTTGGGTGATTTGGCCAAA
 GCCCAGCTGATGGATGCTCTCAAGCAGGCAGCAGCCCTGGTGGTACATTGATGTACAAGGATGGTTCCA
 CACAGCTGAGCGCCAAGGAGGCTTAACTTGTACTGTTAAAGGAATTGTAGTGTTACTAAAAAGCCATGT
 AGGCAACAGCACTCTGACTCTCCAGCCCATGGTGGTGTCTGGAAAAGGACTTCATATCCGAAGATCAC
 TGTGTCTACATACATACGGAGCATTCCCCTTCTGGGACCCAAAGCAAGAAGCACATAGTCTATTTGTCA
 GGAACATACTGTTTTGGACACTGAGGTGTAATGTCCCCTTGTGTTTTAATGCCAAGGACTTTGTGAG
 AACAGTGCTGCAGCTCTATGGTGAAGATGGCAGTTGGAAGCATGTTGCTGATTTTGTAGGACTAGATCCC
 AGAGTTGCTGCATGGCTCATAGACCCAGTGACACTGCACCTTCATTTGAAGATTTAGTAGCAAAACACC
 TAGAAAAGTCCATCACAGTCAAACCAAGCAGCATTGAGAGAAGCCTCAAGAAATCTTTGAGTCAGAA
 TGTATTTATGAATCTGAAGATACTCTACGACCTTACAATGGATCTTTGTTCTAAGTTGAAGGCTTATGGC
 TTATGGCAGCTATTTTGCACCTTTGGAGCTTCCATTGATACCAATTTTGGCAGTGATGAAAAACCATAAGA
 TTCCAGTTGACAAAGAAGAAATGGAGAGGACATCGGCACTCCTCGGGGCTCGCCTCAAGGAATTGGAGCA
 AGAAGCCCATTTTGTGTCAGGAGAACAGTTTCTTATAATGAGTAATAATCAACTTCGTGAGATCCTCTTT
 GGCAAGTTGAAGCTGCACCTGTTGAGTCAGAGGAACATCTTCCAGAACTGGGCTGCAGAACAGCTGT
 CCACATCAGAAGCCATGTTAAATCTCTACAAGACCTTCAACCATACCAAGTTAATTTTGAATATAG
 ACAGGGCTCCATCTCTTCTACATGGAATCAGACTGGAAGTGTGACAGGGAGACTTTCAGCCAAGCATCCA
 AATATCCAGGGTATCTCCAAGCACCAATTAAGATTTCTAAGCCTTGAATTTTAAAGGTAAGAAGAGG
 AGACTGTACCATCTCACAAGAACCCTGTTTGTGTCTCTGAAGGCCACACCTTCTGGCAGCAGACTT
 TTCACAGATTGAATTGCGCATTCTTGCACATTTATCTGGGGATCCAGAGCTTTTGAAGTTATCCAGGAA
 TCTGAAAGAGATGATGATTTTCTACCTGACTTCACAGTGGAAGGACATTCCCATAGAGCGTGTGACAC
 ACATGGACAGAGAACAACCAAGAAAGTGGTGTACTCCGTGGTCTATGGAGCTGGGAAAGAGCGGCTTGC
 TGCTTGCTTGGAGTCACTGTTTTGGAAGCCACCCACTTTTGGAGAGATTTTGCAGAAGTACAAGAAA
 ATCAAGGACTTTGCCAGACAGTTATTGGCCAGTGTACAGTGCAGGCTATGTGACATCCATCTTGGGT
 GAAGGAGGCTCTCCCGAGGATCTGTGCACAGGACCAGCAGCTTCGGGCACAAGCAGAGCGACAGGCAGT
 AAATTTGTGGTACAAGGCTCAGCCGACAGCTCTGTAAGCTAGCCATGATTTCGCATCTCTACTGCAGTA
 GCCACATCCCGACCTTGACAGCCAGTTAGTTGCCAAATTCATGATGAGCTGCTGTTTGAAGTGAAG
 ACACTCAGGTCCCTGAGTTTGCAGCTCTTGTGAGAAGGATCATGGAGTCCTTGCAACAGGTACAGACCT
 GGAAGTGCAGCTGCAGGTGCCCTAAAAGTGAACCTTGAAGTGTGGCCGCTCATGGGGACACCTGACCCCA
 CTGCAGGAGATCCTGGGCTCAGCCTGA

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-MluI
ACCN: NM_001289803
Insert Size: 2547 bp

OTI Disclaimer:	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
OTI Annotation:	Clone contains native stop codon, and expresses the complete ORF without any c-terminal tag.
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:	<u>NM_001289803.1</u> , <u>NP_001276732.1</u>
RefSeq Size:	2940 bp
RefSeq ORF:	2547 bp
Locus ID:	272158
UniProt ID:	<u>Q7TQ07</u>
Cytogenetics:	5 B2

Gene Summary:

DNA polymerase with very low fidelity that catalyzes considerable misincorporation by inserting dTTP opposite a G template, and dGTP opposite a T template. Is the least accurate of the DNA polymerase A family (i.e. POLG, POLN and POLQ). Can perform accurate translesion DNA synthesis (TLS) past a 5S-thymine glycol. Can perform efficient strand displacement past a nick or a gap and gives rise to an amount of product similar to that on non-damaged template. Has no exonuclease activity. Error-prone DNA polymerase that preferentially misincorporates dT regardless of template sequence. May play a role in TLS during interstrand cross-link (ICL) repair. May be involved in TLS when genomic replication is blocked by extremely large major groove DNA lesions. May function in the bypass of some DNA-protein and DNA-DNA cross-links. May have a role in cellular tolerance to DNA cross-linking agents. Involved in the repair of DNA cross-links and double-strand break (DSB) resistance. Participates in FANCD2-mediated repair. Forms a complex with HELQ helicase that participates in homologous recombination (HR) repair and is essential for cellular protection against DNA cross-links.[UniProtKB/Swiss-Prot Function]

Transcript Variant: This variant (2) differs in the 5' UTR and lacks an alternate in-frame exon in the 3' coding region, compared to variant 1. It encodes isoform 2, which lacks an internal segment and is shorter than isoform 1.