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Product datasheet for MC224516

Pola1 (NM_008892) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Pola1 (NM_008892) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Pola1
Synonyms:	AW321876; Pola
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

Fully Sequenced ORF:

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>MC224516 representing NM_008892
Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGCGCCCATGCACGAAGAGGACTGTAAACTGGAGGCAAGCGCTGTGTCAGATTCAGGGAGTTTTGCAG
CTTCCCGAGCTCGGCGAGAAAAGAAATCAAAGAAAGGACGTCAAGAAGCTTTAGAGAGACTGAAAAAGGC
TAAAGCTGGGGAGAAGTATAAATACGAAGTTGAGGACCTCACAAGTGTTTATGAAGAAGTTGATGAAGAG
CAGTATTCGAAACTGGTTCAGGCCCGTCAGGATGATGACTGGATTGTGGATGACGATGGGATAGGCTATG
TGGAAGATGGCAGAGAGATTTTTGATGATGACCTTGAGGATGATGCACTTGACACCTGTGGAAAAGGAAG
TGATGGCAAAGCACACAGAAAGGACAGGAAGGATGTAAAGAAACCTTCAGTGACAAAACCAAACAATATC
AAGGCAATGTTCATTGCTAGTGCCGGGAAGAAAACTACAGATAAAGCAGTAGACTTGTCCAAGGATGATC
TGCTAGGTGACATTCTACAGGATCTAAACACTGAGACAGCTCAAATAACTCCACCACCTGTATTGATACC
AAAGAAAAAAAGATCTACTGGGGCTTTGCTCAACCCTTTTTCAGTGCACACCCCTAAGGCAATTCCTTCA
GGAAAACCTGCTTCCCCTGTCCTCAGGAATGAGCCTCTGTTAACTCCCATTCCTCTTAAACGTGCTGAAC
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CGGTGACTTTGATGAGTCCATGGACACAGAGAAGGTAGATGAGAAGCCTGTGACTGCTAAGACTTGGGAC
CAAGAGACTGAGCCAGTAGAAAGGGTGGAACATGAGGCAGATCCTGAGAGGGGAACCACATCTTACTTAG
AAAATTTTCTGCCAGATGTCTCTTGTTGGGACATTGATCAGGATGATGAAAGCATACCTCAGGAAGTTCA
AGTGGATTCCAGTAATCTCCCATTGGTAAAAGGGGCAGATGATGAACAAGTGTTTCAGTTTTATTGGCTG
GATGCTTATGAAGATCCATACAACCAACCAGGTGTGGTTTTTCTGTTTGGCAAAGTGTGGATTGAATCAG
TCAAAACCCATGTGAGCTGTTGTGTTATGGTGAAAAATATTGAGCGAACACTCTACTTCCTTCCCCGTGA
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CTTTTGAGATACCTGATGTTCCAGAAAAATCTGAGTACCTGGAAGTTAGATACTCGGCAGAAGTGCCACA
GCTTCCACAGAATTTAAAAGGAGAAACATTTTCTCATGTGTTTGGAACTAACACGTCTAGCTTGGAACTG
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TTCTTGATGAATAGGAAGATCAAAGGACCTTGTTGGCTTGAAGTAAAAAATCCACAACTCTTGAATCAGC
CAATCAGTTGGTGTAAATTTGAGGTAATGGCTTTGAAACCAGACCTGGTGAATGTAATTAAGGATGTCAG
TCCTCCTCCACTTGTGGTGATGTCTTTCAGCATGAAGACAATGCAGAATGTACAGAACCATCAACATGAG
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GAATTAATGAGTGCAAGGTTCCTTACTGGTCCAAGATAGGTCGGCTGAGGAGATCCAACATGCCAAAACT
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ATAGAAATTGGAGAAAATGTGCTAAATGGCAGTGTCCCAGTGAGCCAGTTTGAAATTAACAAGGCATTGA
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ACTACTTGGCCCAGCAGATCCACCCTGTTGTGGCTCGGATCTGTGAGCCAATAGATGGAATTGATGCTGT
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AATGCCTTTGTCCTTCATGTGGAACTGAAAATATTTATGATAATGTCTTTGAAGGCTCGGGACTGGATAT
GGAACCCAGTTTGTATCGTTGCAGTAATGTTGATTGTAAGGTTTCACCGTTGACCTTCATGGTACAGCTG
AGCAACAAATTGATCATGGACATTAGACGGTGCATTAAAAAGTACTATGATGGCTGGTTGATATGTGAAG
AGCCAACTTGTTGCAGTCGCCTTCGACGTCTTCCCCTTCATTTCTCCCGAAATGGGCCTCTGTGTCCAGT
CTGCATGAAAGCTGTGCTTAGACCAGAGTATTCTGACAAGTCCTTGTACACCCAGCTGTGCTTTTACCGG
TACATTTTTGATGCGGACTGTGCACTGGAAAAACTTACTGAACATGAGAAAGATAAATTGAAGAAGCAGT
TTTTCCCTCTCCGAGTTCTTCAGGACTACAGAAAAGTCAAGAACATAGCAGAGCAGTTCTTGTCCTGGAG
TGGCTACTCTGAAGTGAACCTCAGCAAGCTCTTCGCCAATTACGCTGGGAAGTCCTGA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-MluI

ACCN: NM_008892

Insert Size: 4398 bp

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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).
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_008892.2, NP_032918.1
RefSeq Size:	5350 bp
RefSeq ORF:	4398 bp
Locus ID:	18968
UniProt ID:	P33609
Cytogenetics:	X 41.06 cM
Gene Summary:	Plays an essential role in the initiation of DNA replication. During the S phase of the cell cycle, the DNA polymerase alpha complex (composed of a catalytic subunit POLA1/p180, a regulatory subunit POLA2/p70 and two primase subunits PRIM1/p49 and PRIM2/p58) is recruited to DNA at the replicative forks via direct interactions with MCM10 and WDHD1. The primase subunit of the polymerase alpha complex initiates DNA synthesis by oligomerising short RNA primers on both leading and lagging strands. These primers are initially extended by the polymerase alpha catalytic subunit and subsequently transferred to polymerase delta and polymerase epsilon for processive synthesis on the lagging and leading strand, respectively. The reason this transfer occurs is because the polymerase alpha has limited processivity and lacks intrinsic 3' exonuclease activity for proofreading error, and therefore is not well suited for replicating long complexes. In the cytosol, responsible for a substantial proportion of the physiological concentration of cytosolic RNA:DNA hybrids, which are necessary to prevent spontaneous activation of type I interferon responses.[UniProtKB/Swiss-Prot Function]

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