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Product datasheet for MR226939

Pola1 (NM_008892) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Pola1 (NM_008892) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Pola1
Synonyms:	AW321876; Pola
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin
ORF Nucleotide Sequence:	>MR226939 representing NM_008892 Red=Cloning site Blue=ORF Green=Tags(s) TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC GCCGCGATCGCC ATGGCGCCCATGCACGAAGAGGACTGTAAACTGGAGGCAAGCGCTGTGTCAGATTCAGGGAGTTTTGCAG CTTCCCGAGCTCGGCGAGAAAAGAAATCAAAGAAAGGACGTCAAGAAGCTTTAGAGAGACTGAAAAAGGC TAAAGCTGGGGAGAAGTATAAATACGAAGTTGAGGACCTCACAAGTGTTTATGAAGAAGTTGATGAAGAG CAGTATTCGAAACTGGTTCAGGCCCGTCAGGATGATGACTGGATTGTGGATGACGATGGGATAGGCTATG TGGAAGATGGCAGAGAGATTTTTGATGATGACCTTGAGGATGATGCACTTGACACCTGTGGAAAAGGAAG TGATGGCAAAGCACACAGAAAGGACAGGAAGGATGTAAAGAAACCTTCAGTGACAAAACCAAACAATATC AAGGCAATGTTCATTGCTAGTGCCGGGAAGAAAACTACAGATAAAGCAGTAGACTTGTCCAAGGATGATC TGCTAGGTGACATTCTACAGGATCTAAACACTGAGACAGCTCAAATAACTCCACCACCTGTATTGATACC AAAGAAAAAAAGATCTACTGGGGCTTTGCTCAACCCTTTTTCAGTGCACACCCCTAAGGCAATTCCTTCA GGAAAACCTGCTTCCCCTGTCCTCAGGAATGAGCCTCTGTTAACTCCCATTCCTCTTAAACGTGCTGAAC TTGCTGGAGAGCTGGCTCAGCCAGAATGTCCAGAAGATGAGCAGGAGCTAGGGGTAATGGAGTTTGAAGA CGGTGACTTTGATGAGTCCATGGACACAGAGAAGGTAGATGAGAAGCCTGTGACTGCTAAGACTTGGGAC CAAGAGACTGAGCCAGTAGAAAGGGTGGAACATGAGGCAGATCCTGAGAGGGGAACCACATCTTACTTAG AAAATTTTCTGCCAGATGTCTCTTGTTGGGACATTGATCAGGATGATGAAAGCATACCTCAGGAAGTTCA AGTGGATTCCAGTAATCTCCCATTGGTAAAAGGGGCAGATGATGAACAAGTGTTTCAGTTTTATTGGCTG GATGCTTATGAAGATCCATACAACCAACCAGGTGTGGTTTTTCTGTTTGGCAAAGTGTGGATTGAATCAG TCAAAACCCATGTGAGCTGTTGTGTTATGGTGAAAAATATTGAGCGAACACTCTACTTCCTTCCCCGTGA AATGAAATTTGACCTAAACACAGGGAAAGAAACAGCAATTCCAGTTACAATGAAGGATGTTTATGAAGAA TTTGATTCAAAAATTTCAGCAAAATATAAAATAATGAAGTTCAAGTCCAAGATAGTGGAAAAGAACTATG CTTTTGAGATACCTGATGTTCCAGAAAAATCTGAGTACCTGGAAGTTAGATACTCGGCAGAAGTGCCACA GCTTCCACAGAATTTAAAAGGAGAAACATTTTCTCATGTGTTTGGAACTAACACGTCTAGCTTGGAACTG TTCTTGATGAATAGGAAGATCAAAGGACCTTGTTGGCTTGAAGTAAAAAATCCACAACTCTTGAATCAGC

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Protein Sequence:

>MR226939 representing NM_008892
Red=Cloning site Green=Tags(s)

MAPMHEEDCKLEASAVSDSGSFAASRARREKKSKKGRQEALERLKKAKAGEKYKYEVEDLTSVYEEVDEE
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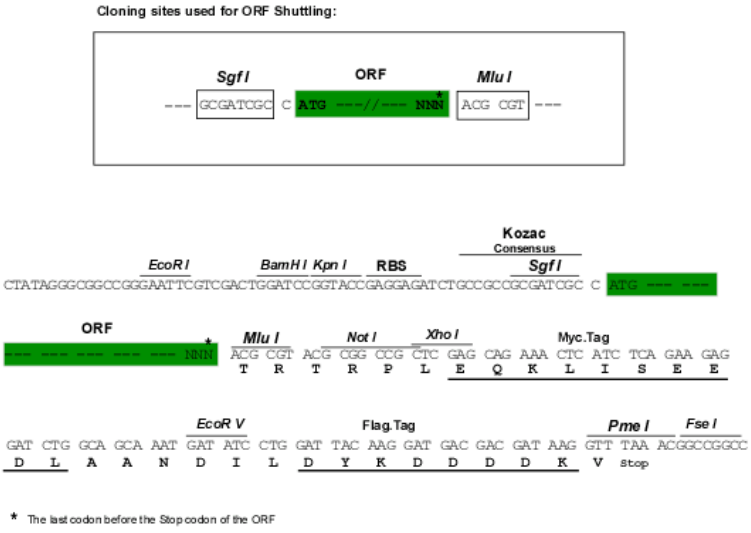
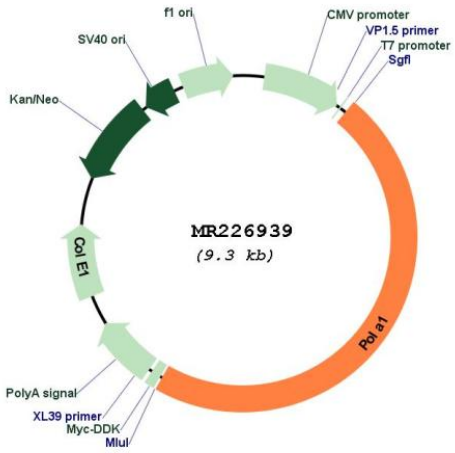
Restriction Sites: SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN:	NM_008892
ORF Size:	4395 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_008892.2, NP_032918.1
RefSeq Size:	5350 bp
RefSeq ORF:	4398 bp
Locus ID:	18968
UniProt ID:	P33609
Cytogenetics:	X 41.06 cM
MW:	167.3 kDa
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]