OriGene Technologies, Inc.
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
https://www.origene.com
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

Product datasheet for MR217545

Pold1 (NM_011131) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Pold1 (NM_011131) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Pold1
Synonyms:	125kDa
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin
ORF Nucleotide Sequence:	>MR217545 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s) TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC GCCGCGATCGCC ATGGATTGTAAGCGGCGACAAGGACCAGGCCCTGGGGTGCCCCCAAAGCGGGCTCGAGGGCACCTCTGGG ATGAGGACGAGCCTTCGCCGTCGCAGTTTGAGGCGAACCTGGCACTGCTGGAGGAAATAGAGGCTGAGAA CCGGCTGCAGGAGGCAGAGGAGGAGCTGCAGCTGCCCCCAGAGGGCACCGTGGGTGGGCAGTTTTCCACT GCAGACATTGACCCTCGGTGGCGGCGGCCCACCCTACGTGCCCTGGACCCCAGCACGGAGCCCCTCATCT TCCAGCAGCTGGAGATTGACCACTATGTGGGCTCAGCACCACCCCTGCCAGAAGGGCCCCCGCCATCCCG GAACTCAGTGCCCATACTGAGGGCCTTTGGGGTCACCGATGAAGGCTTCTCCGTCTGCTGCCACATACAG GGCTTTGCCCCCTACTTCTACACCCCCGCGCCTCCTGGTTTTGGGGCCGAGCACCTGAGTGAGCTGCAGC AGGAGCTGAACGCAGCCATCAGCCGGGACCAGCGCGGTGGGAAGGAGCTCTCAGGGCCGGCAGTGCTGGC AATAGAGCTATGCTCCCGTGAGAGCATGTTTGGGTACCACGGTCATGGCCCTTCTCCATTTCTCCGCATC ACCCTGGCACTACCCCGCCTTATGGCACCAGCCCGCCGCCTTCTGGAACAGGGTGTCCGAGTGCCAGGCC TGGGCACCCCGAGCTTCGCACCCTACGAAGCCAACGTGGACTTTGAGATCCGGTTCATGGTGGATGCTGA CATTGTGGGATGCAACTGGTTGGAGCTGCCAGCTGGAAAGTACGTTCGGAGGGCGGAGAAGAAGGCCACC CTGTGTCAGCTGGAGGTGGACGTGCTGTGGTCAGATGTGATCAGTCACCCACCGGAGGGGCAGTGGCAGC GCATTGCACCCCTGCGTGTGCTTAGCTTCGACATCGAGTGTGCTGGCCGAAAAGGCATCTTCCCTGAGCC TGAGCGTGACCCCGTGATCCAGATCTGTTCTCTGGGGCTGCGCTGGGGGGAGCCGGAGCCATTCTTGCGT CTGGCACTCACGCTGCGGCCCTGTGCCCCCATCCTGGGTGCCAAAGTGCAGAGCTATGAGCGGGAAGAAG ACCTGCTCCAGGCCTGGGCCGACTTCATCCTTGCCATGGACCCTGACGTGATCACCGGCTACAACATTCA GAACTTTGACCTCCCATACCTCATCTCTCGGGCACAGGCCCTAAAGGTGGACCGCTTCCCTTTCCTGGGC CGCGTGACTGGTCTCCGCTCCAACATCCGTGACTCCTCCTTCCAATCAAGGCAGGTCGGCCGGCGGGACA GTAAGGTGATCAGCATGGTGGGTCGCGTTCAGATGGATATGCTGCAGGTGCTGCTTCGGGAACACAAGCT CCGCTCCTACACGCTCAACGCTGTGAGTTTCCACTTCCTGGGCGAGCAGAAGGAGGACGTTCAGCACAGC ATCATCACCGACCTGCAGAATGGGAACGAACAGACGCGCCGCCGCCTGGCCGTGTACTGCCTGAAGGACG

View online »

CCTTTCTGCCACTCCGACTACTAGAGCGCCTTATGGTGCTGGTGAACAATGTGGAGATGGCGCGTGTCAC
CGGTGTACCCCTTGGGTACCTGCTCACCCGGGGCCAGCAGGTCAAGGTCGTGTCTCAGCTGCTGCGCCAG
GCCATGCGCCAGGGGCTGCTGATGCCTGTGGTGAAGACCGAGGGCGGTGAGGACTACACGGGAGCCACAG
TCATTGAGCCCCTCAAAGGGTACTATGACGTCCCCATTGCCACCCTGGACTTCTCCTCCTTGTACCCATC
CATCATGATGGCCCATAATCTGTGCTACACCACGCTGCTCCGACCTGGGGCTGCCCAGAAGCTGGGCCTT
AAACCAGATGAGTTCATCAAGACACCCACTGGGGATGAGTTTGTGAAGTCATCTGTACGGAAGGGCCTCC
TGCCCCAGATCCTGGAGAATCTGCTGAGTGCCCGCAAGAGGGCCAAGGCTGAGCTGGCTCAGGAGACGGA
CCCCCTGCGGCGACAGGTCTTGGACGGCCGGCAACTGGCACTAAAAGTGAGTGCCAACTCCGTATATGGC
TTCACTGGTGCCCAGGTGGGCAAGCTGCCATGTTTGGAGATCTCCCAGAGTGTCACTGGGTTCGGGCGGC
AGATGATTGAGAAAACCAAGCAGCTTGTGGAGTCCAAGTACACCGTGGAAAATGGCTACGATGCCAACGC
CAAGGTAGTCTACGGTGACACGGACTCTGTGATGTGCCGGTTTGGCGTCTCCTCTGTGGCTGAAGCAATG
TCTCTGGGGCGGGAGGCTGCAAACTGGGTATCCAGTCACTTCCCATCACCCATCCGGCTGGAGTTCGAGA
AGGTTTACTTCCCATACCTGCTCATCAGCAAGAAGCGCTATGCTGGCCTGCTCTTCTCCTCCCGCTCTGA
TGCCCATGACAAAATGGACTGCAAGGGCCTGGAGGCTGTGCGCAGGGACAACTGTCCCCTGGTGGCCAAC
CTCGTTACATCCTCCCTGCGCCGGATCCTCGTGGACCGGGACCCTGATGGGGCAGTAGCCCATGCCAAGG
ACGTCATCTCGGACCTGCTGTGCAACCGCATAGACATCTCCCAGCTGGTCATCACCAAAGAGTTGACCCG
AGCAGCAGCAGACTATGCTGGCAAGCAGGCTCACGTGGAGCTGGCTGAGAGGATGAGGAAGCGCGACCCC
GGCAGTGCGCCCAGCCTGGGTGACCGAGTCCCCTATGTGATCATTGGTGCTGCTAAGGGTGTGGCCGCCT
ACATGAAGTCGGAGGACCCCCTGTTTGTGCTGGAGCACAGCCTGCCCATCGACACTCAGTACTACCTGGA
GCAGCAGCTGGCCAAGCCGCTCTTGCGCATCTTTGAGCCCATCCTGGGTGAGGGCCGTGCAGAGTCTGTG
CTGCTGCGCGGTGACCACACACGATGCAAGACTGTGCTCACCAGCAAGGTGGGCGGCCTCTTGGCCTTCA
CCAAGCGCCGCAACTGTTGCATTGGCTGCCGCTCCGTAATCGACCATCAAGGAGCCGTGTGTAAGTTCTG
TCAGCCACGGGAGTCGGAGCTCTATCAGAAGGAGGTGTCACACCTGAATGCCTTGGAAGAACGGTTCTCT
CGCCTCTGGACACAGTGTCAACGCTGCCAGGGCAGCTTGCATGAGGACGTCATCTGTACCAGCCGTGACT
GTCCCATCTTCTACATGCGCAAGAAGGTGCGCAAGGACCTGGAAGACCAGGAACGGCTGCTGCAGCGCTT
TGGACCGCCCGGCCCTGAGGCCTGG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>MR217545 protein sequence
Red=Cloning site Green=Tags(s)

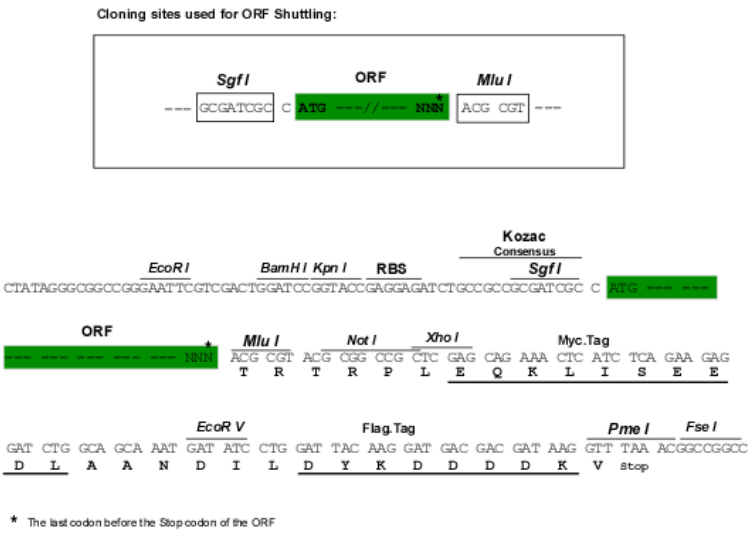
MDCKRRQGPGPGVPPKRARGHLWDEDEPSPSQFEANLALLEEIEAENRLQEAEEELQLPPEGTVGGQFST
ADIDPRWRRPTLRALDPSTEPLIFQQLEIDHYVGSAPPLPEGPPPSRNSVPILRAFGVTDEGFSVCCHIQ
GFAPYFYTPAPPGFGAEHLSELQQELNAAISRDQRGGKELSGPAVLAIELCSRESMFGYHGHGPSPFLRI
TLALPRLMAPARRLLEQGVRVPGLGTPSFAPYEANVDFEIRFMVDADIVGCNWLELPAGKYVRRAEKKAT
LCQLEVDVLWSDVISHPPEGQWQRIAPLRVLSFDIECAGRKGIFPEPERDPVIQICSLGLRWGEPEPFLR
LALTLRPCAPILGAKVQSYEREEDLLQAWADFILAMDPDVITGYNIQNFDLPYLISRAQALKVDRFPFLG
RVTGLRSNIRDSSFQSRQVGRRDSKVISMVGRVQMDMLQVLLREHKLRSYTLNAVSFHFLGEQKEDVQHS
IITDLQNGNEQTRRRLAVYCLKDAFLPLRLLERLMVLVNNVEMARVTGVPLGYLLTRGQQVKVVSQLLRQ
AMRQGLLMPVVKTEGGEDYTGATVIEPLKGYYDVPIATLDFSSLYPSIMMAHNLCYTTLLRPGAAQKLGL
KPDEFIKTPTGDEFVKSSVRKGLLPQILENLLSARKRAKAELAQETDPLRRQVLDGRQLALKVSANSVYG
FTGAQVGKLPCLEISQSVTGFGRQMIEKTKQLVESKYTVENGYDANAKVVYGDTDSVMCRFGVSSVAEAM
SLGREAANWVSSHFPSPIRLEFEKVYFPYLLISKKRYAGLLFSSRSDAHDKMDCKGLEAVRRDNCPLVAN
LVTSSLRRILVDRDPDGAVAHAKDVISDLLCNRIDISQLVITKELTRAAADYAGKQAHVELAERMRKRDP
GSAPSLGDRVPYVIIGAAKGVAAYMKSEDPLFVLEHSLPIDTQYYLEQQLAKPLLRIFEPILGEGRAESV
LLRGDHTRCKTVLTSKVGGLLAFTKRRNCCIGCRSVIDHQGAVCKFCQPRESELYQKEVSHLNALEERFS
RLWTQCQRCQGSLHEDVICTSRDCPIFYMRKKVRKDLEDQERLLQRFGPPGPEAW

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

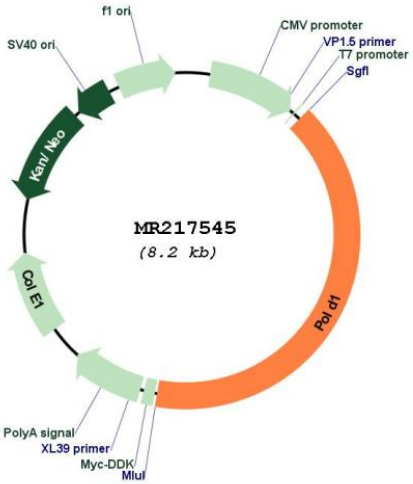
Restriction Sites:

SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM_011131

ORF Size: 3318 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_011131.2
RefSeq Size:	3428 bp
RefSeq ORF:	3318 bp
Locus ID:	18971
UniProt ID:	P52431
Cytogenetics:	7 28.83 cM
MW:	123.7 kDa
Gene Summary:	As the catalytic component of the trimeric (Pol-delta3 complex) and tetrameric DNA polymerase delta complexes (Pol-delta4 complex), plays a crucial role in high fidelity genome replication, including in lagging strand synthesis, and repair. Exhibits both DNA polymerase and 3'- to 5'-exonuclease activities. Requires the presence of accessory proteins POLD2, POLD3 and POLD4 for full activity. Depending upon the absence (Pol-delta3) or the presence of POLD4 (Pol-delta4), displays differences in catalytic activity. Most notably, expresses higher proofreading activity in the context of Pol-delta3 compared with that of Pol-delta4. Although both Pol-delta3 and Pol-delta4 process Okazaki fragments in vitro, Pol-delta3 may be better suited to fulfill this task, exhibiting near-absence of strand displacement activity compared to Pol-delta4 and stalling on encounter with the 5'-blocking oligonucleotides. Pol-delta3 idling process may avoid the formation of a gap, while maintaining a nick that can be readily ligated. Along with DNA polymerase kappa, DNA polymerase delta carries out approximately half of nucleotide excision repair (NER) synthesis following UV irradiation. Under conditions of DNA replication stress, in the presence of POLD3 and POLD4, may catalyze the repair of broken replication forks through break-induced replication (BIR). Involved in the translesion synthesis (TLS) of templates carrying O6-methylguanine or abasic sites.[UniProtKB/Swiss-Prot Function]