

## Product datasheet for **MG217545**

### **Pold1 (NM\_011131) Mouse Tagged ORF Clone**

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Pold1 (NM_011131) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Pold1
Synonyms:	125kDa
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>MG217545 representing NM_011131 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGATTGTAAGCGGCGACAAGGACCAGGCCCTGGGGTGCCCCAAAGCGGGCTCGAGGGCACCTCTGGG  
ATGAGGACGAGCCTTCGCCGTCGAGTTTGAGGCGAACCTGGCACTGCTGGAGGAAATAGAGGCTGAGAA  
CCGGCTGCAGGAGGCAGAGGAGGAGCTGCAGCTGCCCCAGAGGGCACCGTGGGTGGCAGTTTTCCACT  
GCAGACATTGACCCTCGGTGGCGGCGGCCACCCTACGTGCCCTGGACCCAGCACGAGGCCCTCATCT  
TCCAGCAGCTGGAGATTGACCACTATGTGGGCTCAGCACCACCCTGCCAGAAGGGCCCCGCCATCCCC  
GAACTCAGTGCCATACTGAGGGCCTTTGGGGTACCCGATGAAGGCTTCTCCGTCTGCTGCCACATACAG  
GGCTTTGCCCCCTACTTCTACACCCCGCGCCTCCTGGTTTTGGGGCCGAGCACCTGAGTGAGCTGCAGC  
AGGAGCTGAACGCAGCCATCAGCCGGGACCAGCGCGGTGGGAAGGAGCTCTCAGGGCCGGCAGTGCTGGC  
AATAGAGCTATGCTCCCGTGAGAGCATGTTTGGGTACCACGGTCATGGCCCTTCTCCATTCTCCGCATC  
ACCCTGGCACTACCCCGCCTTATGGCACCAGCCCGCCGCTTCTGGAACAGGGTGTCCGAGTGCCAGGCC  
TGGGACCCCGAGCTTCGCACCCTACGAAGCCAACGTGGACTTTGAGATCCGTTTCATGGTGGATGCTGA  
CATTGTGGGATGCAACTGGTTGGAGCTGCCAGCTGGAAAGTACGTTCCGAGGGCGGAGAAGAAGGCCACC  
CTGTGTGAGCTGGAGGTGGAGCTGTGGTGTGATGTGATCAGTCAACCCAGGGGCGAGTGGCAGC  
GCATTGCACCCCTGCGTGTGCTTAGCTTCGACATCGAGTGTGCTGGCCGAAAAGGCATCTCCCTGAGCC  
TGAGCGTGACCCCGTGATCCAGATCTGTTCTCTGGGGTGCCTGGGGGAGCCGGAGCCATTCTTGCGT  
CTGGCACTCACGCTGCGGCCCTGTGCCCCATCCTGGGTGCCAAAGTGACAGCTATGAGCGGGAAGAAG  
ACCTGCTCCAGGCCTGGGCCGACTTCACTCTGGCATGGACCCTGACGTGATCACCGGCTACAACATTCA  
GAACTTTGACCTCCCATACCTCATCTCTCGGGCACAGGCCCTAAAGGTGGACCGCTTCCCTTTCTGGGC  
CGCGTGACTGGTCTCCGCTCCAACATCCGTGACTCCTCCTTCCAATCAAGGCAGGTGGCCGGCGGGGACA  
GTAAGGTGATCAGCATGGTGGTTCGCTTCAGATGGATATGCTGCAGGTGCTGCTTCGGGAACACAAGCT  
CCGCTCCTACACGCTCAACGCTGTGAGTTCCACTTCTGGGCGAGCAGAAGGAGGACGTTTCAGCACAGC



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ATCATCACCGACCTGCAGAAATGGGAACGAACAGACGCGCCGCGCTGGCCGTGTACTGCCTGAAGGACG  
 CCTTTCTGCCACTCCGACTACTAGAGCGCCTTATGGTGTCTGGTGAACAATGTGGAGATGGCGCGTGTAC  
 CGGTGTACCCCTTGGGTACCTGCTACCCGGGGCCAGCAGGTCAAGGTCTGTCTCAGCTGCTGCCACG  
 GCCATGCGCCAGGGGCTGCTGATGCCTGTGGTGAAGACCAGGGCGGTGAGGACTACACGGGAGCCACAG  
 TCATTGAGCCCTCAAAGGGTACTATGACGTCCCATTGCCACCCTGGACTTCTCCTCTGTACCCATC  
 CATCATGATGGCCATAATCTGTGTACACCACCTGCTCCGACCTGGGGCTGCCAGAAGTGGGCCTT  
 AAACCAGATGAGTTCATCAAGACACCCACTGGGATGAGTTTGTGAAGTCACTGTACGGAAGGGCTCC  
 TGCCCCAGATCCTGGAGAATCTGCTGAGTGCCCGCAAGAGGGCCAAGGCTGAGCTGGCTCAGGAGACGGA  
 CCCCCTGCGGCGACAGGTCTTGGACGGCCGCAACTGGCACTAAAAGTGAAGTCCAACTCCGTATATGGC  
 TTCCTGGTGGCCAGGTGGGCAAGCTGCCATGTTTGGAGATCTCCAGAGTGTACTGGGTTGCGGCGGC  
 AGATGATTGAGAAAACCAAGCAGCTTGTGGAGTCCAAGTACACCGTGGAAAATGGCTACGATGCCAACGC  
 CAAGGTAGTCTACGGTGACACGGACTCTGTGATGTCCGGTTTGGCGTCTCCTCTGTGGCTGAAGCAATG  
 TCTCTGGGGCGGAGGCTGCAAACCTGGGTATCCAGTCACTCCCATACCCATCCGGCTGGAGTTCGAGA  
 AGGTTTACTTCCATACCTGCTCATCAGCAAGAAGCGCTATGCTGGCCTGCTTCTCCTCCCGCTCTGA  
 TGCCCATGACAAAATGGACTGCAAGGGCTGGAGGCTGTGCGCAGGGACAACCTGTCCCCTGGTGGCCAAC  
 CTGCTTACATCCTCCCTGCGCCGATCCTCGTGGACCGGACCCTGATGGGGCAGTAGCCCATGCCAAGG  
 ACGTCATCTCGGACCTGCTGTGCAACCGCATAGACATCTCCCAGCTGGTCATACCAAAGAGTTGACCCG  
 AGCAGCAGCAGACTATGCTGGCAAGCAGGCTCACGTGGAGCTGGCTGAGAGGATGAGGAAGCGCGACCCC  
 GGCAGTGCGCCAGCCTGGGTGACCGAGTCCCCTATGTGATCATTGGTGTGCTAAGGGTGTGGCCGCT  
 ACATGAAGTGGGAGACCCCTGTTTGTGCTGGAGCACAGCCTGCCCATCGACACTCAGTACTACCTGGA  
 GCAGCAGCTGGCAAGCCGCTCTTGCGCATCTTGGCCCATCCTGGGTGAGGGCCGTGCAGAGTCTGTG  
 CTGCTGCGCGGTGACCACACAGATGCAAGACTGTGCTACCAGCAAGGTGGGCGGCTCTTGGCCTTCA  
 CCAAGCGCCGCAACTGTTGCAATGGCTGCCGCTCCGTAATCGACCATCAAGGAGCCGTGTGAAGTCTG  
 TCAGCCACGGGAGTCCGAGCTTATCAGAAGGAGGTGTACACCTGAATGCCTTGAAGAACGGTCTCT  
 CGCCTCTGGACACAGTGTCAACGCTGCCAGGGCAGCTTGCATGAGGACGTCTGTACCAGCCGTGACT  
 GTCCCATCTTCTACATGCGCAAGAAGGTGCGCAAGGACCTGGAAGACCAGGAACGGCTGCTGCAGCGCTT  
 TGGACCGCCCGCCCTGAGGCCTGG

ACGCGTACGCGGCGCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:**

>MG217545 representing NM\_011131  
 Red=Cloning site Green=Tags(s)

MDCKRRQGPVPPKRRARGHLWDEDEPSQFEANLALLEEIEAENRLQEAEEELQLPPEGTVGGQFST  
 ADIDPRWRRPTLRALDPSTEPLIFQQLIDHYVGSAPPLPEGPPSRNSVPIILRAFVGTDEGFSVCCHIQ  
 GFAPYFYTPAPPFGAEHLSELQQELNAAISRDRGGKELSGPAVLAIELCSRESMFGYHGHGSPFLRI  
 TLALPRLMAPARRLLEQVVRVPLGTPSFAPYEANVDFEIRFMVDADIVGCNWLELPAGKYVRRAEKAT  
 LCQLEVDVLWSDVISHPPEGQWQRIAPLRVLSFDIECAGRKGIFPEPERDPVIQICSLGLRWGEPEPFLR  
 LALTLRPCAPILGAKVQSYEREEDLLQAWADFILAMPDVITGYNIQNFDPYLIISRAQALKVDRFPFLG  
 RVTGLRSNIRDSSFQSRQVRRDSKVISMVRVQMDMLQVLLREHKLRSYTLNAVSHFLGEQKEDVQHS  
 IITDLQNGNEQTRRRRLAVYCLKDAFLPLRLLERLMVLVNNVEMARVTGVPLGYLLTRGQVQVVSQLLRQ  
 AMRQGLLMPVVKTEGGEDYTGATVIEPLKGYDVPIATLDFSSLYPSIMMAHNLCTYTLRPGAAQKLG  
 KPDEFIKTPTGDEFVKSSVRKGLLPQILENLLSARKRAKAEQAQETDPLRRQVLDGRQLALKVSANSVYG  
 FTGAQVGLPCLEISQSVTGFGRQMIKTKQLVESKYTVENGYDANAKVVYGDTSVMCRFGVSSVAEAM  
 SLGREANWVSSHFPSPIRLEFEKVFYFYLLISKRYAGLLFSSRSDAHDKMDCKGLEAVRRDNCPLVAN  
 LVTSSLRRILVDRDPDGAHAHAKDVISDLLCNRIDISQLVITKELTRAAADYAGKQAHVELAERMRKRD  
 GSAPSLGDRVPYVIIGAAGVAAVMKSEDPFLVLEHSLPIDTQYYLEQLAKPLLRIFEPILGEGRAESV  
 LLRGDHTRCKTVLTSKVGLLAFTKRRNCCIGCRSVIDHQAVCKFCQPRESEL YQKEVSHLNALEERFS  
 RLWTQCRCQGS LHEDVICTSRDCPIFYMRKKVRKDLEDQERLLQRF GPPGPEAW

TRTRPLE - GFP Tag - V

**Restriction Sites:**

Sgfl-MluI



<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_011131.2</a>
<b>RefSeq Size:</b>	3428 bp
<b>RefSeq ORF:</b>	3318 bp
<b>Locus ID:</b>	18971
<b>UniProt ID:</b>	<a href="#">P52431</a>
<b>Cytogenetics:</b>	7 28.83 cM
<b>Gene Summary:</b>	<p>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]</p>