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Product datasheet for MC216220

Pold2 (NM_008894) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Pold2 (NM_008894) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Pold2
Synonyms:	50kDa; p50; po1D2
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin

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Fully Sequenced ORF:

>MC216220 representing NM_008894
Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGTTCTCCGAGCAGGCAGCACAGAGGGCCCACACTCTGCTCGCCCCGCCCTCTGCCAGCAATGCCACCT
TTGCCCGGGTACCTGTGGCAACTTACACCAACTCCTCACAGCCCTTCCGACTGGGAGAGCGCAGCTTTAA
CCGGCAGTACGCCCATATTTATGCCACCCGCCTCATCCAGATGAGACCGTTCCTGGTGAGCCGGGCGCAG
CAACACTGGGGCAGCCGAGTTGAAGTGAAGAAGTTGTGTGAGCTGCAGCCTGGGGAGCAGTGCTGTGTGG
TGGGCACGCTGTTCAAAGCCATGTCCCTCCAACCCTCCATCCTGCGGGAGATCAGCGAGGAGCACAACCT
GGTCCCCCAGCCTCCACGGAGCAAATATATCCACCCGGATGACGAGCTGGTCTTAGAAGATGAGCTGCAG
CGTATCAAACTGAAAGGCACCATTGATGTGTCAAAGCTGGTCACAGGAACGGTCTTGGCCGTGTTGGGCT
CTGCGAAAGATGACGGGAGGTTTCAGGTTGAAGACCACTGCTTTGCTGACCTGGCTCCACAGAAGCCGGT
ACCCCCACTTGACACAGACAGATTTGTGCTACTGGTATCCGGACTGGGCCTGGGCGGTGGTGGCGGGGAG
AGCCTCCTGGGCACCCAGCTGCTGGTGGACGTGGTGACGGGACAGCTTGGGGACGAAGGAGAACAGTGCA
GTGCTGCCCACGTCTCTCGAGTCATCCTCGCAGGCAACCTGCTCAGCCATAACACCCAGAGCAGAGACTC
CATCAACAAGGCCAAATACCTTACCAAGAAAACCCAGGCAGCCAGTGTGGAGGCAGTCAAAATGCTGGAC
GAGATCCTTCTGCAACTGAGTGCCTCGGTACCGGTGGATGTGATGCCAGGCGAGTTTGATCCCACCAACT
ATACACTCCCGCAGCAGCCCCTGCACCCCTGCATGTTCCCGCTGGCCACCGCCTACTCCACACTCCAGCT
GGTCACCAACCCATACCAAGCCACCATTGATGGAGTAAGGTTCCTGGGGACATCTGGACAGAACGTGAGT
GATATCTTCCGGTATAGCAGCATGGAAGACCACTTAGAGATCCTAGAGTGGACCCTGCGGGTTCGTCACA
TCAGCCCCACGGCTCCAGACACCCTAGGGTGCTACCCCTTCTACAAAACCGACCCGTTCATCTTTCCGGA
ATGTCCTCACGTCTACTTCTGTGGCAACACCCCCAGCTTTGGTTCCAAAATCATCCGAGGTCCTGAGGAC
CAGGTAGTGCTGTTAGTGGCTGTTCCTGACTTCAGTTCCACACAGACGGCCTGCCTAGTGAACTTACGCA
GCCTGGCCTGCCAGCCTATCAGCTTTGCGGGCTTCGGGGCAGAGCAAGAGGACCTGGAGGGCCTGGGGCT
GGGTCCCTAG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-MluI

ACCN: NM_008894

Insert Size: 1410 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).

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_008894.2, NP_032920.2
RefSeq Size:	1634 bp
RefSeq ORF:	1410 bp
Locus ID:	18972
UniProt ID:	O35654
Cytogenetics:	11 A1
Gene Summary:	As a component of the trimeric and tetrameric DNA polymerase delta complexes (Pol-delta3 and Pol-delta4, respectively), plays a role in high fidelity genome replication, including in lagging strand synthesis, and repair. Pol-delta3 and Pol-delta4 are characterized by the absence or the presence of POLD4. They exhibit differences in catalytic activity. Most notably, Pol-delta3 shows higher proofreading activity than Pol-delta4. Although both Pol-delta3 and Pol-delta4 process Okazaki fragments in vitro, Pol-delta3 may also 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, required for 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 performed by Pol-delta4, independently of DNA polymerase zeta (REV3L) or eta (POLH). Facilitates abasic site bypass by DNA polymerase delta by promoting extension from the nucleotide inserted opposite the lesion. Also involved in TLS as a component of the POLZ complex. Along with POLD3, dramatically increases the efficiency and processivity of DNA synthesis of the minimal DNA polymerase zeta complex, consisting of only REV3L and REV7. [UniProtKB/Swiss-Prot Function]