

Product datasheet for **MR231047**

Palb2 (NM_001289843) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Palb2 (NM_001289843) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Palb2
Synonyms:	BC066140
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



[View online »](#)

ORF Nucleotide
Sequence:

>MR231047 representing NM_001289843
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGACTATATTTACAGTAAACTCAGTAGTATATAAAGCTGTGCGTGCCCATGGTCAGCTGCCAGGAAGTC
 CCAATTCTTGTTCTGTAATGATCTCACGCATAGTAACTTGCCAGCAAATAGTACCCCAAATCTAAATC
 TTTAAAATCTCCCAGTAACTGTTGATGAGAGAAATGAACCTCTTCAGGAAGATGAAATTTCTTGTTCCA
 TCTAAGAACTTCAACCTGGCAGCAGTCTCTCCTCTCCACAGAAAGTCAAATACATTCTTGACTATGC
 TTGAAGGCCTTCTGTTTCTGCAGAATACTATGTTAGAACAACCCGTCGATGTCAGATTGTCAGAGAAA
 AATAGCTCTGGAAGCTGTAATTCAAAGTCATTTGGGTGTCAAAAAGAAAGAGCTTAAAAAGAAAACAAA
 GCTACTAAGGCGGTGCTCTCTCCAGTGAAGACACTGACCAGAGTAAAGTGGCATGCTGGACACGAGCA
 CGGGACAGTCCAGTTCAGGAAGCCTCTCTCAGAACTGCTCTACCAGCTGAGGTCAGCTCTCTCCAGG
 ACCTGCTGAAAAGGCCACCACACCGCCACCTGGTAGAGGACACAGAGGAAACGAAAATCAGCCCGCACC
 TCCACACTGGGTCACTGCCAGCTGCTTTTTCTCCTTGTGCCGCACTGGCTGTTAACAGGTCCAAGGGCA
 AATTCACCAAGCATAAATGTCAGAACAGAGGCGTGGTTATTCATGACTTTGAGTTACCTGATGAAGACTT
 TGGGCTTCTTAACTTGAATAATGAAGTCTGCTCGGAAAACTGATTGAGTCTCTGACTCAAAAAAC
 TGTGGTGAGAGGCTTCTAGAGAAGGAAACCATGCTGCTCTGGAGGAACTGCAAAGAGATTCCGGAGACGG
 AGGGCTTGAAGAGGAGCTCACTGTTCCACCAGGAGAAGCGTACCGTCCAGGGCCAACCTTGAGAAGGCA
 GCCAGGGAGCAAGGACCTTCTCATCCATAGTGCTTTTCACTCCTGCAGACACTGCTGCGCCTAACGAC
 AGTGGCAGGCCTCTCCCTCCCTGTGCTCACCTGCTTTCCCATCTTAGGCATGACTCCAGCTCTGGCT
 CCCAAGCAGCCGGTGAGACTCTATCTACTGAAGCTGCACAGCCTTGCTCTACATCCCACTCCTCTTT
 GGGAGACACAAAACAGTCTTGTCAATAACAGTAAACAGTGAACAGTTTCCAGCTGCTCACAAAACCGGAC
 ACCAACCTGCAAGCGTCAGGTAGGCAAGGACAACCTGCCTGTGACAGTCACTCTGGCCCCAAGCAACAC
 CTCTACCTGTTGAGTCATTCACTTTTCCAGAGAAAATCAGCTTTGTGGAATGCATGCCTCGAGTTACATGA
 ACATTCCACTGAACAGACTGAACTGCAGATCGCCCTGCTTGTGACAATCTAAACCCAGGAAACCTACAG
 TTGGTTTCCAGAGTTAAAGAATCCTTCCAGTTCCTGCTCTGTGGATGTGAGCGCCATGTGGTGGGAAAGAG
 CTGGTGCTAAGGAGCCATGTATCGTAACTGCTTGTGAAGATGTAGTTTCTTTGGAAACCTTGAATTC
 TCTGCAGTGGGAGAAAGTTCATACCTGGCACTTCCAGAGGTTCCAGTATTACAAATAGTCCAGTGCCT
 GATGTTTACAATCTTATATGTGTAGCTTTGGGAAGTTTGGAAATCAGAGAAATCAGGGCGTTGCTGTGCT
 CTTCTGGTGATGACAGTAAAAGCAAGTCTCCTGAAATCTGGAGATATAAAAGCTATGCTTGGCCTGAC
 AAAGCGGAGGCTAGTTAGTAGCACTGGGACCTTTTGAATCAACAAATACAAATCATGACATTTGCTGAC
 GACGGAAGCAGCAAAGATGAACAGCTTTTGTGCTCCTGATGAGACTGTACTGACTTTTGTGAAAGTCC
 AAGGGACGCAGGAAGCTGCTTGGTACTACCACTGTGAACAGCATTGTGATCTGGAATTTAAAAACCGG
 CCAGCTCCTGAAGAAGATGCACATTGATGACTCTACCAGGCTTCGGTCTGTACGGAGCCTATTCTGAG
 AAGTTCCCTGTAGCCAGGCTGGCCTGCACCTGTCTATGTCCTGAGTAAGATGACCTTGAACCTACGAT
 TCCCTGCTTCTACCTCTCCAGTGTGGGCTTTCTGGCACAAAGTCAGGCTGAGCTACAATCCTATTGAC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >MR231047 representing NM_001289843
 Red=Cloning site Green=Tags(s)

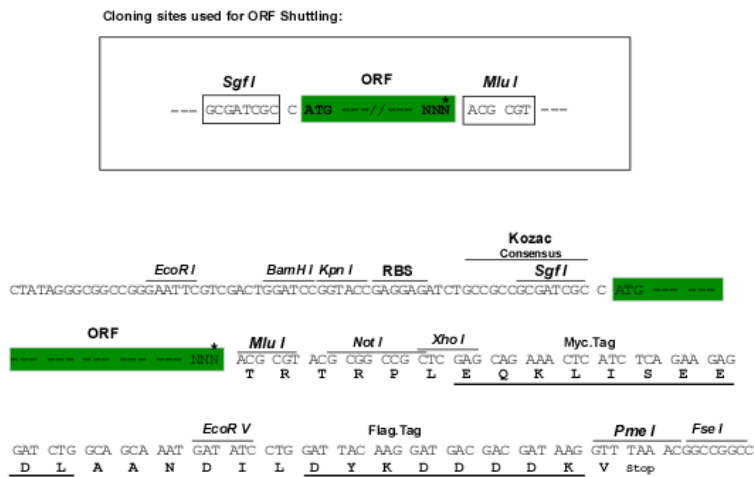
MTIFTVNSVVYKAVRAHGQLPGSPNSCSVNDLTHSNLPANSTPNSKSLKSPSNTVDERNEPLQEDEILGP
 SKNFNLA AVSPPSTESQIHSCMLEGLLFPAEYVVRTTRRMSDCQRKIALEAVIQSHLGVKKKELKKKTK
 ATKAVLSSSEDTQSESGMLDTSTGQSSSGLSQKLLSPA EVSSPPGPAGKATTPPPGRGHRGKRKRSART
 STLGHQCQLLFPPCAALAVNRSGKGF TKHKCQNRGVVIHDFELPDEDFGLLKLELKSCEKLI ESPDSKN
 CGERLPREGNHAALEELQRDSETEGLEEELTVPPGEAYRPGPTLRRQPGSKDLSSSIVLFTPADTAAPND
 SGRPPPSLCSPAFPI LGMTPALGSQAAGETL STEAAQPCSTS QPPLLGD TNSLVNNSKQCNS SACSPKPD
 TNLQASGRQGPACDSDSGPQATPLPVESFTFRENQLCGNACLELHEHSTEQTETADRPACDNLNPNLQ
 LVSELKNPSSSCSVDVSAMWVERAGAKEPCIVTACEDVVS LKPLNSLQWEKVHTWHFTEVPVLQIVPVP
 DVYNLICVALGSLEIREIRALLCSSGDDSEKQVLLKSGDIKAMLGLTKRRLVSSTGTFCNQIQIMTFAD
 DGSSKDEQLLMPDET VLTFAEVQGTQEALLGTTVNSI VIWNLKTGQLLKKMHIDDSYQASVCHGAYSE
 KVP CSPGW PAVVYVLSKMTLNLRFPASTSPVLGFLAQVRLSYNPID

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

Restriction Sites:

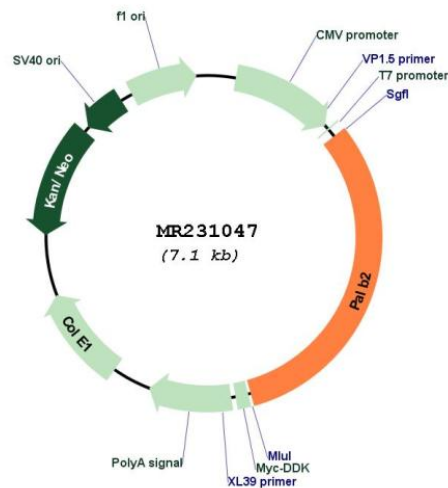
Sgfl-MluI

Cloning Scheme:



* The last codon before the Stop codon of the ORF

Plasmid Map:



ACCN: NM_001289843

ORF Size: 2238 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_001289843.1](#), [NP_001276772.1](#)

RefSeq Size: 3253 bp

RefSeq ORF: 2241 bp

Locus ID: 233826

UniProt ID: [Q3U0P1](#)

Cytogenetics: 7 F2

MW: 80.9 kDa

Gene Summary: Plays a critical role in homologous recombination repair (HRR) through its ability to recruit BRCA2 and RAD51 to DNA breaks. Strongly stimulates the DNA strand-invasion activity of RAD51, stabilizes the nucleoprotein filament against a disruptive BRC3-BRC4 polypeptide and helps RAD51 to overcome the suppressive effect of replication protein A (RPA). Functionally cooperates with RAD51AP1 in promoting of D-loop formation by RAD51. Serves as the molecular scaffold in the formation of the BRCA1-PALB2-BRCA2 complex which is essential for homologous recombination. Via its WD repeats is proposed to scaffold a HR complex containing RAD51C and BRCA2 which is thought to play a role in HR-mediated DNA repair. Essential partner of BRCA2 that promotes the localization and stability of BRCA2. Also enables its recombinational repair and checkpoint functions of BRCA2. May act by promoting stable association of BRCA2 with nuclear structures, allowing BRCA2 to escape the effects of proteasome-mediated degradation. Binds DNA with high affinity for D loop, which comprises single-stranded, double-stranded and branched DNA structures. May play a role in the extension step after strand invasion at replication-dependent DNA double-strand breaks; together with BRCA2 is involved in both POLH localization at collapsed replication forks and DNA polymerization activity (By similarity).[UniProtKB/Swiss-Prot Function]