

## Product datasheet for MR231500

### Palb2 (NM\_001289842) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Palb2 (NM_001289842) 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
ORF Nucleotide Sequence:	>MR231500 representing NM_001289842 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**GCGATCGCC**

ATGGAAGAGCTTCCGGGAAGCCCCTCAGCTATGCGGAGAAGGAAAAGTTGAAGGAAAAGCTAGCATT  
TGAAAAAGGAATACAGCAGGACACTTGTCTGACTTCAGCGTGCCAAAAGAGCTGAGAAGGCTAAGAACT  
TAAGAAAGCCATAGAAGATGGTGTGCCAGCCAGAAGCTTCTCACAGCTAAGCCACTTGAATCTATA  
AATAAAGGCTTCTTGTGACACATTGCAAAGCAACCATCTGGATGAGGAGACTGGAGAAAACATCTCTC  
AGATACTTGATGTTGAACCTCAATCCTTAACTGTAACAAGGCAAGAAGTATTACATACACCAAGAGC  
AGGTGACATTCAGGACAACCTTTGCATAGCACCAGCAGCCCTGATGGCAAGAAAGAGCAGAACACGCTT  
CCGGGGACAACAAAGACGCCGTGGGAGAAGTCACTGTTTACAGGAGAAGGAAGATTATTTTGACACTA  
ATTCTCTGGCGCTCCTTGGTAAGCATCGAAAAGGGCAAGAATCAATCAGTAGGAAGAATTCTAGGACTCC  
CGTGAGTGAAAAGACTCACCTTTAAGTCTCAGGTCTCAGATCCCTGACCCTCCAGCACTTGTTACAGGA  
ATTGGAGAGGGTATATTAATCCGCCATCTGGCAAATCAGAAAGGGGAATTGATACACTTGTGAGAGGAA  
ATACTGTCTCCGGGAGGCTGCAGTTCCTTCATGTACTGCGTCAAACAGCAATCACAGCAGCACCTTGA  
GCATACACCTCCTAAAAGTGGCTGCAAAATTAATACTACTCAGGGCCCGGCTTCATCCAAAACCTGGTGGCA  
CAAGACCAAAAAATGACTATATTTACAGTAAACTCAGTAGTATATAAAGCTGTGCGTGCCCATGGTCAGC  
TGCCAGGAAGTCCCAATTCTTGTCTGTAATGATCTCACGCATAGTAACTTGCCAGCAAAATGATACCCC  
AAACTCTAAATCTTTAAATCTCCAGTAACACTGTTGATGAGAGAAAATGAACCTCTTCAGGAAGATGAA  
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CTTGTACTATGCTGAAGCCTTCTGTTTCTGCAGAATACTATGTTAGAACAACCCGTCGTATGTCAGA  
TTGTCAGAGAAAAATAGCTCTGGAAGCTGTAATCAAAGTCATTTGGGTGTAAAAAGAAAGAGCTTAAA  
AAGAAAACCAAAGCTACTAAGGCGTCTCCTCTCCAGTGAAGACTGACCAGAGTGAAGTGGCATGC  
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CTCTCCTCCAGGACCTGCTGAAAGGCCACCACACCGCCACCTGGTAGAGGACACAGAGGGAAAACGAAAA  
TCAGCCCGCACCTCCACTGGGTCACTGCCAGTGTCTTTCTCCTTGTGCCGCACTGGCTGTTAAACA



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GGTCCAAGGGCAAATTCACCAAGCATAAATGTCAGAACAGAGGCGTGGTTATTCATGACTTTGAGTTACC  
 TGATGAAGACTTTGGGCTTCTTAAACTTAAAAATTTGAAGTCTGCTCGGAAAACTGATTGAGTCTCT  
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 GCGCCTAACGACAGTGGCAGGCCCTCCCTCCCTGTGCTCACCTGCTTTCCCATCTTAGGCATGACTC  
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 TTGCTGAAGTCCAAGGGACGCAGGAAGCTCTGCTTGGTACTACCACTGTGAACAGCATTGTGATCTGGAA  
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 GCCTATTCTGAGAAGTTCCTGTAGCCAGGCTGGCCTGCACCTGTCTATGTCTGAGTAAAGATGACCT  
 TGAACCTACGATTCCCTGCTTCTACCTCTCCAGTGTGGGCTTTCTGGCACAAGTCAAGCTGAGCTACAA  
 TCCTATTGAC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>MR231500 representing NM\_001289842  
 Red=Cloning site Green=Tags(s)

MEELSGKPLSYAEKEKLEKLAFLKKEYSRTLARLQRAKRAEKAKNSKKAIEDGVQPPEASSQLSHSESI  
 NKGFPDQLQSNHLDEETGENISQILDVEPQSFNCKQGKEVLHTPRAGDIQGQLLHSTSSPDGKKEQNTL  
 PGTTKTPWEKSSVSQEKEDYFDTNSLALLGKHRKQESISRKNSRTPVSEKTHLLSLRSQIPDPPALVTG  
 IGEGILIPPSGKSERGIDTLVRGNTVSAEAAVPSCTASNSNHSQHLEHTPPKSGCKITTQGPASSTNLVA  
 QDQKMTIFTVNSVYKAVRAHGQLPGSPNSCSVNDLTHSNLPANSTPNKSLKSPSNTVDERNEPLQEDE  
 ILGPSKNFNLAAVSPPSTESQIHSCTMLEGLLFPAYEYVRTTRMSDCQRKIALEAVIQSHLGVKKKELK  
 KKTATKAVVLSSEDTQSESGMLDTSTGQSSSGLS QKLLSPAEVSSPPGPAGKATTPPPGRGHRGKRK  
 SARTSTLGHQQLFPCCAALAVNRSKGKFKHKCQNRGVVIHDFELPDEDFGLLKLEKLSKSEKLEIESP  
 DSKNCGERLPREGNHAAL EELQRDSETEGLEEELTVPPGEAYRPGPTLRRQPGSKDLSSSIVLFTPADTA  
 APNDSGRPPSLCSPAFPILGMTPALGSQAAGETLSTEAAPCSTSQPPLLGDNTSLVNSKQCNSACS  
 PKPDTNLQASGRQGPACDSDSGPQATPLPVESFTFRENQLCGNACLELHEHSTEQTETADRPACDNLNP  
 GNQLVSELKNPSSSCSVDVSAMWVERAGAKEPCIVTACEDVVSLLWKPLNSLQWEKVHTWHFTEVPVLI  
 VPVPDVYNLICVALGSL EIREIRALLCSSGDDSEKQVLLKSGDIKAMGLTKRRLVSSTGTFCNQIQIM  
 TFADDGSSKDEQLLMPDET VLF AEVQGTQEALLGTTTVNSIVIWNLKTGQLLKKMHIDDSYQASVCHG  
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TRTRPLEQKLISEEDLAANDILDYKDDDDKV

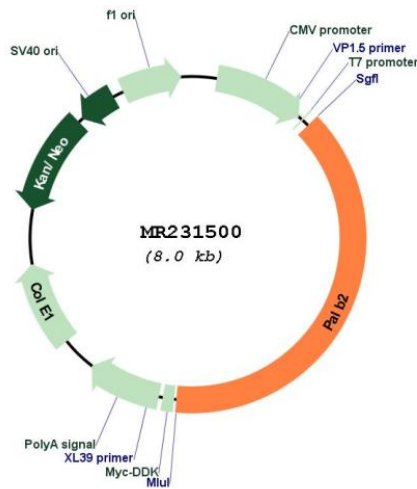
**Restriction Sites:**

Sgfl-MluI

Cloning Scheme:



Plasmid Map:



ACCN:

NM\_001289842

ORF Size:

3090 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](#)

<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<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>	<u><a href="#">NM_001289842.1</a></u> , <u><a href="#">NP_001276771.1</a></u>
<b>RefSeq Size:</b>	3347 bp
<b>RefSeq ORF:</b>	3093 bp
<b>Locus ID:</b>	233826
<b>UniProt ID:</b>	<u><a href="#">Q3U0P1</a></u>
<b>Cytogenetics:</b>	7 F2
<b>MW:</b>	111.8 kDa
<b>Gene Summary:</b>	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]