

## Product datasheet for **MC228836**

### Palb2 (NM\_001289843) Mouse Untagged Clone

#### Product data:

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



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**Fully Sequenced ORF:** >MC228836 representing NM\_001289843  
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGACTATATTTACAGTAACTCAGTAGTATATAAAGCTGTGCGTGCCCATGGTCAGCTGCCAGGAAGTC  
 CCAATTCTTGTTCTGTAATGATCTCACGCATAGTAACTTGCCAGCAAATAGTACCCCAAATCTAAATC  
 TTTAAAATCTCCCAGTAACTGTTGATGAGAGAAATGAACCTCTTCAGGAAGATGAAATTTCTGTGTC  
 TCTAAGAACTTCAACCTGGCAGCAGTCTCTCCTTCCACAGAAAGTCAAATACATTCTGTACTATGC  
 TTGAAGGCCTTCTGTTTCTGCAGAATACTATGTTAGAACAACCCGTCGATGTCAGATTGTCAGAGAAA  
 AATAGCTCTGGAAGCTGTAATTCAAAGTCATTTGGGTGTCAAAAAGAAAGAGCTTAAAAAGAAAACAAA  
 GCTACTAAGGCGGTCGCTCTCCAGTGAAGACACTGACCAGAGTAAAGTGGCATGCTGGACACGAGCA  
 CGGGACAGTCCAGTTCAGGAAGCCTCTCTCAGAACTGCTCTACCAGCTGAGGTCAGCTCTCTCCAGG  
 ACCTGCTGAAAAGGCCACCACACCGCCACTGGTAGAGGACACAGAGGAAACGAAAATCAGCCCGCACC  
 TCCACACTGGGTCACTGCCAGCTGCTTTTTCTCCTTGTGCCGCACTGGCTGTTAACAGGTCCAAGGGCA  
 AATTCACCAAGCATAAATGTCAGAACAGAGGCGTGGTTATTCATGACTTTGAGTTACCTGATGAAGACTT  
 TGGGCTTCTTAACTTGA AAAATGAAAGTCTGCTCGGAAAACTGATTGAGTCTCTGACTCAAAAAAC  
 TGTGGTGAGAGGCTTCTAGAGAAGGAAACCATGCTGCTCTGGAGGAACTGCAAAGAGATTCCGGAGACGG  
 AGGGCTTGAAGAGGAGCTCACTGTTCCACCAGGAGAAGCGTACCGTCCAGGGCCAACCTGAGAAGGCA  
 GCCAGGGAGCAAGGACCTTCTCATCCATAGTGCTTTTCACTCCTGCAGACACTGCTGCGCCTAACGC  
 AGTGGCAGGCCTCTCCCTCCCTGTGCTCACCTGCTTTCCCATCTTAGGCATGACTCCAGCTCTGGCT  
 CCCAAGCAGCCGGTGAGACTCTATCTACTGAAGCTGCACAGCCTTGCTCTACATCCCAACCTCCTCTCT  
 GGGAGACAAAAACAGTCTTGTCAATAACAGTAAACAGTGAACAGTTTCCAGCTGCTCACCAAAACCGGAC  
 ACCAACCTGCAAGCGTCAGGTAGGCAAGGACAACCTGCCTGTGACAGTACTCTGGCCCCAAGCAACAC  
 CTCTACCTGTTGAGTCATTCACTTTTCCAGAGAAAATCAGCTTTGTGGAATGCATGCCTCGAGTTACATGA  
 ACATTCCTGACTGAACAGACTGAACTGCAGATCGCCCTGCTTGTGACAATCTAAACCCAGGAAACCTACAG  
 TTGGTTTCCAGAGTTAAGAATCCTTCCAGTTCCTGCTCTGTGGATGTGAGCGCCATGTGGTGGGAAAGAG  
 CTGGTGCTAAGGAGCCATGTATCGTAACTGCTTGTGAAGATGTAGTTTCTTTGGAAACCTTGAATTC  
 TCTGCAGTGGGAGAAAGTTCATACCTGGCACTTCCAGAGGTTCCAGTATTACAAATAGTCCAGTGCCT  
 GATGTTTACAATCTTATATGTGTAGCTTTGGGAAGTTTGGAAATCAGAGAAATCAGGGCGTTGCTGTGCT  
 CTCTGGTGATGACAGTAAAAGCAAGTCTCCTGAAATCTGGAGATATAAAAGCTATGCTTGGCCTGAC  
 AAAGCGGAGGCTAGTTAGTAGCACTGGGACCTTTTGAATCAACAAATACAAATCATGACATTTGCTGAC  
 GACGGAAGCAGCAAAGATGAACAGCTTTTGTGCTCCTGATGAGACTGTACTGACTTTTGTGAAAGTCC  
 AAGGGACGCAGGAAGCTCTGCTTGGTACTACCACTGTGAACAGCATTGTGATCTGGAATTTAAAAACCGG  
 CCAGCTCCTGAAGAAGATGCACATTGATGACTCTACCAGGCTTCGGTCTGTACGGAGCCATTCTGAG  
 AAGTTCCCTGTAGCCAGGCTGGCCTGCACCTGTCTATGTCCTGAGTAAGATGACCTTGAACCTACGAT  
 TCCCTGCTCTACCTCTCCAGTGTGGGCTTTCTGGCACAAAGTCAGGCTGAGCTACAATCCTATTGACTG  
 A

**ACGCGT**ACGCGGCCGCTCGAGCAGAAAACCTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Restriction Sites:** SgfI-MluI  
**ACCN:** NM\_001289843  
**Insert Size:** 2241 bp

<b>OTI Disclaimer:</b>	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).
<b>OTI Annotation:</b>	Clone contains native stop codon, and expresses the complete ORF without any c-terminal tag.
<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>NM_001289843.1, NP_001276772.1</u>
<b>RefSeq Size:</b>	3253 bp
<b>RefSeq ORF:</b>	2241 bp
<b>Locus ID:</b>	233826
<b>UniProt ID:</b>	<u>Q3U0P1</u>
<b>Cytogenetics:</b>	7 F2

**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]

Transcript Variant: This variant (3) differs in the 5' UTR and 5' coding region, initiates translation at a downstream start codon and contains an alternate 3' terminal exon, compared to variant 1. It encodes isoform 3, which is shorter and has a distinct C-terminus, compared to isoform 1. Sequence Note: This RefSeq record was created from transcript and genomic sequence data to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on transcript alignments.