

## Product datasheet for MC227425

### Palb2 (NM\_001289845) Mouse Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Palb2 (NM_001289845) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Palb2
Synonyms:	BC066140
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Fully Sequenced ORF:	>MC227425 representing NM_001289845 Red=Cloning site Blue=ORF Orange=Stop codon

TTTGTAAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGC**C

ATGGAAGAGCTTTCCGGGAAGCCCTCAGCTATGCGGAGAAGGAAAAGTTGAAGGAAAAGCTAGCATTTT  
TGAAAAAGGAATACAGCAGGACACTTGTCTGACTTCAGACTGAACTGCAGATCGCCTGCTTGTGACAA  
TCTAAACCCAGGAAACCTACAGTTGGTTTCAGAGTTAAAGAATCCTTCCAGTTCTGCTCTGTGGATGTG  
AGCGCCATGTGGTGGGAAAGAGCTGGTGCTAAGGAGCCATGTATCGTAACTGCTTGTGAAGATGTAGTTT  
CTCTTTGGAAACCCTTGAATTCTCTGCAGTGGGAGAAAGTTTCATACCTGGCACTTCACAGAGGTTCCAGT  
ATTACAAATAGTTCCAGTGCCTGATGTTTACAATCTTATATGTGTAGCTTTGGGAAGTTTGGAAATCAGA  
GAAATCAGGGCGTTGCTGTGCTCTTCTGGTGATGACAGTGAAGCAAGTCCCTCCTGAAATCTGGAGATA  
TAAAGCTATGCTTGGCCTGACAAAGCGGAGGCTAGTTAGTAGCACTGGGACCTTTTGCAATCAACAAAT  
ACAAATCATGACATTTGCTGACGACGGAAGCAGCAAGATGAACAGCTTTTGATGCCTCCTGATGAGACT  
GTACTGACTTTTGTGAAGTCCAAGGGACGCAGGAAGCTCTGCTTGGTACTACCACTGTGAACAGCATTG  
TGATCTGGAATTTAAAAACCGGCCAGCTCCTGAAGAAGATGCACATTGATGACTCCTACCAGGCTTCGGT  
CTGTCACGGAGCCTATTCTGAGAAGGGGCTCCTGTTTGTGTTGTGAGTCAACCTTGTGCCAAAGAGAGC  
CAGGCCCTTGAAGCCCTGTGTTCCAGCTGCTGGTGATTAACCCTAAGACGGCCAGAGTGTGGGTGTTT  
TGCTGTGTTCCCTTCTCAGGGGCAGGCTGGAAGGTTCTGGAAGGGGATGTGAAAGATCATGTCCGAGC  
AGCAGTCTGACTTCTGGGACAATTGCCATTTGGGATTTGCTTCTGGGTCACTGCACGGCTCTCCTCCCA  
CCTGTCTCTGACCAGAGTTGGTCTTTGGTTAAATGGTCGGGTACAGATTCTCACTTGCTAGCTGGACAAA  
AGGATGGAATATATTTATATACCGATACTTT**TAA**

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA


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<b>Restriction Sites:</b>	Sgfl-MluI
<b>ACCN:</b>	NM_001289845
<b>Insert Size:</b>	1155 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>Note:</b>	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
<b>RefSeq:</b>	<u>NM_001289845.1, NP_001276774.1</u>
<b>RefSeq Size:</b>	1590 bp
<b>RefSeq ORF:</b>	1155 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 (5) lacks three consecutive exons in the coding region, compared to variant 1. It encodes isoform 5, which lacks an internal in-frame segment and is shorter, compared to isoform 1.