

Product datasheet for **MC223601**

Palb2 (NM_001081238) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Palb2 (NM_001081238) 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:	>MC223601 representing NM_001081238 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGAAGAGCTTCCGGGAAGCCCTCAGCTATGCGGAGAAGGAAAAGTTGAAGGAAAAGCTAGCATTTT
TGAAAAAGGAATACAGCAGGACACTTGCCTGACTTCAGCGTGCCAAAAGAGCTGAGAAGGCTAAGAACTC
TAAGAAAGCCATAGAAGATGGTGTGCCCGCCAGCAGAAGCTTCTCACAGCTAAGCCACTCTGAATCTATA
AATAAAGGCTTTCCTTGTGACACATTGCAAAGCAACCATCTGGATGAGGAGACTGGAGAAAACATCTCTC
AGATACTTGATGTGAACCTCAATCCTTAACTGTAACAAGGCAAAGAAGTATTACATACACCAAGAGC
AGGTGACATTCAGGACAACCTTTGCATAGCACCAGCAGCCCTGATGGCAAGAAAGAGCAGAACACGCTT
CCGGGGACAACAAAGACGCCGTGGGAGAAGTCATCTGTTTCACAGGAGAAGGAAGATTATTTTGACACTA
ATTCTCTGGCGCTCCTTGGTAAGCATCGAAAAGGGCAAGAATCAATCAGTAGGAAGAATTCTAGGACTCC
CGTGAGTGAAAAGACTCACCTTTAAGTCTCAGGTCTCAGATCCCTGACCCTCCAGCACTTGTTACAGGA
ATTGGAGAGGGTATATTAATCCGCCATCTGGCAAATCAGAAAGGGGAATTGATACACTTGTGAGAGGAA
ATACTGTCTCCGCGGAGGCTGCAGTTCCTTCATGACTGCGTCAAACAGCAATCACAGTCAGCACCTTGA
GCATACACCTCCTAAAAGTGGCTGCAAAATTACTACTCAGGGCCCGGCTTCATCCAAAACCTGGTGGCA
CAAGACCAAAAATGACTATATTTACAGTAACTCAGTAGTATATAAAGCTGTGCGTGCCATGGTTCAGC
TGCCAGGAAGTCCAATTCTTGTCTGTAATGATCTCACGCATAGTAACTTGCCAGCAAATAGTACCCC
AAACTCTAAATCTTTAAATCTCCACAGTAACTGTTGATGAGAGAAAATGAACCTCTTCAGGAAGATGAA
ATTCTTGGTCCATCTAAGAACTCAACCTGGCAGCAGTCTCTCCTCCTTCCACAGAAAAGTCAAATACATT
CTTGTACTATGCTTGAAGCCTTCTGTTTCTGCAGAATACTATGTTAGAACAACCCGTCGTATGTCAGA
TTGTCAGAGAAAAATAGCTCTGGAAGCTGTAATTCAAAGTCATTTGGGTGTCAAAAAGAAAGAGCTTAAA
AAGAAAACCAAAGCTACTAAGGCGGTCGCTCTCCAGTGAAGACACTGACCAGAGTGAAGTGGCATGC
TGGACACGAGCACGGGACAGTCCAGTTCAGGAAGCCTCTCTCAGAACTGCTCTCACCAGCTGAGGTCAG
CTCTCTCCAGGACCTGTGAAAGGCCACCACACCGCCACCTGGTAGAGGACACAGAGGAAAACGAAAA



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TCAGCCCGCACCTCCACACTGGGTCACTGCCAGCTGCTTTTTCTCCTTGTGCCGCACTGGCTGTTAACA
 GGTCCAAGGGCAAATTCACCAAGCATAAATGTCAGAACAGAGGCGTGGTTATTCATGACTTTGAGTTACC
 TGATGAAGACTTTGGGCTTCTTAAACTGAAAAATTGAAGTCCTGCTCGGAAAACTGATTGAGTCTCT
 GACTCAAAAACTGTGGTGAGAGGCTTCTAGAGAAGGAAACCATGCTGCTCTGGAGAACTGCAAAGAG
 ATTCGGAGACGGAGGGCTTGAAGAGGAGCTCACTGTTCCACCAGGAGAAGCGTACCGTCCAGGGCCAAC
 CCTGAGAAGGCAGCCAGGGAGCAAGGACCTTCTCATCCATAGTGCTTTTCACTCCTGCAGACACTGCT
 GCGCCTAACGACAGTGGCAGGCCCTCCCTCCCTGCTCACCTGCTTTCCCATCTTAGGCATGACTC
 CAGCTCTTGGCTCCAAGCAGCCGGTGAGACTCTATCTACTGAAGCTGCACAGCCTTGCTCTACATCCCA
 ACCTCCTCTCTTGGGAGACACAAACAGTCTTGTAATAACAGTAAACAGTGAACAGTTCAGCCTGCTCA
 CAAAAACCGACACCAACCTGCAAGCGTCAGGTAGGCAAGGACAACCTGCCTGTGACAGTACTCTGGCC
 CCAAAGCAACACCTTACCTGTTGAGTCATTCACTTTCAGAGAAAATCAGCTTTGTGAAATGCATGCC
 CGAGTTACATGAACATTCAGTGAACAGACTGAAACTGCAGATCGCCCTGCTTGTGACAATCTAAACCA
 GGAACCTACAGTTGGTTTCAGAGTTAAGAATCCTTCCAGTTCCTGCTGTGGATGTGAGCGCCATGT
 GGTGGGAAAGAGCTGGTCTAAGGAGCCATGTATCGTAACTGCTGTGAAGATGTAGTTTCTTTGGAA
 ACCCTTGAATTCTGTCAGTGGGAGAAAGTTCATACCTGGCACTTCACAGAGTTCAGTATTACAATA
 GTTCCAGTGCCTGATGTTTACAATCTTATATGTGTAGCTTTGGGAAGTTTGGAAATCAGAGAAATCAGGG
 CGTTGCTGTGCTCTTCTGGTGATGACAGTGAAGCAAGTCCCTCCTGAAATCTGGAGATATAAAGCTAT
 GCTTGGCTGACAAAGCGGAGGCTAGTTAGTAGCACTGGGACCTTTTGAATCAACAAATACAAATCATG
 ACATTTGCTGACGACGGAAGCAGCAAAGATGAACAGCTTTTGTGCTCCTGATGAGACTGTACTGACTT
 TTGCTGAAGTCCAAGGGACGCAGGAAGCTCTGCTTGGTACTACCACTGTGAACAGCATTGTGATCTGGAA
 TTTAAAAACCGCCAGCTCCTGAAGAAGATGCACATTGATGACTCCTACCAGGCTTCGGTCTGTACGGA
 GCCTATTCTGAGAAGGGGCTCCTGTTTGTGTTGTTGAGTCAACCTGTGCCAAAGAGAGCCAGGCCCTTG
 GAAGCCCTGTGTTCCAGTCTGGTGTATTAACCTAAGACGGCCAGAGTGTGGTGTCTGCTGTGTTT
 CCTTCTCAGGGGCAGGCTGGAAGGTTCCCTGGAAGGGGATGTGAAAGATCATGTGCGCAGCAGCAGTCTG
 ACTTCTGGGACAATTGCCATTTGGGATTTGCTTCTGGGTCACTGCACGGCTCTCCTCCACCTGTCTCTG
 ACCAGAGTTGGTCTTGGTTAAATGGTCGGGTACAGATTCTCACTTGCTAGCTGGACAAAAGGATGGAAA
 TATATTTATATACCGATACTTTTAA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites:

Sgfl-Mlul

ACCN:

NM_001081238

Insert Size:

3315 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_001081238.2](#), [NP_001074707.1](#)

RefSeq Size: 3750 bp

RefSeq ORF: 3315 bp

Locus ID: 233826

UniProt ID: [Q3U0P1](#)

Cytogenetics: 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 (1) represents the longest transcript and encodes the longest 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.