

Product datasheet for **MG210399**

Palb2 (BC066140) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Palb2 (BC066140) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Palb2
Synonyms:	4732427B05
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide
Sequence:

>MG210399 representing BC066140
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGCATCGCC**

ATGGAAGAGCTTCCGGGAAGCCCTCAGCTATGCGGAGAAGAAAAGTTGAAGGAAAAGCTAGCATT
TGAAAAAGGAATACAGCAGGACACTTGCTCGACTTCAGCGTGCCAAAAGAGCTGAGAAGGCTAAGA
TAAGAAAAGCCATAGAAGATGGTGTGCCCCAGCCAGAAGCTTCCTCACAGCTAAGCCACTCTGA
AATAAAGGCTTTCCTTGTGACACATTGCAAAGCAACCCTCGGATGAGGAGACTGGAGAAAAATCT
AGATACTTGATGTTGAACCTCAATCCTTAACTGTAACAAGGCAAGAAGTATTACATACCAAGAG
AGGTGACATTCAAGGACAACCTTTGCATAGCACCAGCAGCCCTGATGGCAAGAAAGAGCAGAAC
CCGGGACAAACAAAGACGCCGTGGGAGAAGTCATCTGTTTACAGGAGAAGGAAGATTATTTGAC
ATTTCTCTGGCGCTCCTTGACTTTGAGTTACCTGATGAAGACTTTGGGCTTCTTAACTTGAAA
ATTTGAAATGTCCTGCTCGGAAAAGTATTGAGTCTCCTGACTCAAAAAGTGGTGAGAGGCTT
CCTAGAGAAGGAACCATGCTGCTGAGGAACTGCAAAGAGATTCGGAGACGGAGGGCTTGAAG
AGGAGCTCACTGTTCCACCAGGAGAAGCGTACCGTCCAGGGCCAAACCCTGAGAAGGCAGCC
AGGAGCAAGGACCTTTCTTCATCATAGTGCTTTTCACTCCTGCAGACACTGCTGCGCCTAAC
GACAGTGGCAGGCCTCCTCCCTCCCTGTGCTCACCTGCTTTCCCATCTTAGGCATGACTCC
AGCTCTTGGCTCCCAAGCAGCCGGTGAGACTCTATCTA CTGAAGCTGCACAGCCTTGCTCT
ACATCCCAACCTCCTCTCTTGGGAGACACAAACAGTCTTGTCAATAA CAGTAAACAGTGC
AACAGTTCAGCCTGCTCACAAAACCGGACACCAACCTGCAAGCGTCAGGTAGGCAAGGACA
ACCTGCCTGTGACAGTACTCTGGCCCCAAGCAACACCTACCTGTTGAGTCATTCACTTTCA
GAGAAAATCAGCTTTGTGAAAATGCATGCCTCGAGTTACATGAACATCCACTGAACAGACT
GAACTGCAGATCGCCCTGCTTGTGACAATCTAAACCCAGGAAACCTACAGTTGGTTTCAGAG
TTAAAGAAATCCTTCCAGTTCTGCTGTGGATGTGAGCGCCATGTGGTGGGAAAAGAGCTGG
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AGTTCCAGTGCCTGATGTTTACAATCTTATATGTGTAGCTTTGGGAAGTTGGAAATCAG
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TAGCACTGGACCTTTTGAATCAACAAATACAAATCATGACATTTGCTGACGACGGAAGC
AGCAAAGATGAGCAGCTTTGATGCCTCCTGATGAGACTGTACTGACTTTTGTGAAGTCCA
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AGAGAGCCAGGCCCTTGAAGCCCTGTGTTCCAGCTGCTGGTGATTAACCTAAGACGGCC
CAGAGTGGGTGTTCTGCTGTGTTCCCTCCTCAGGGGCAGGCTGGAAGGTTCTGGAAGG
GGATGTGAAAGATCATGTGCGCAGCAGCAGTCTGACTTCTGGGACAATTGCCATTTGGG
ATTTGCTTCTGGTCACTGCACGGCTCTCCTCCACCTGTCTCTGACCAGAGTTGGTCTTT
GGTAAATGGTCGGGTACAGATTCTCACTTGCTAGCTGGACAAAAGGATGGAATATATTT
ATATACCGATACTTT

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >MG210399 representing BC066140
 Red=Cloning site Green=Tags(s)

MEELSGKPLSYAEKEKLKEKLAFLKKEYSRTLARLQRAKRAEKAKNSKKAIEDGVPQPEASSQLSHSESI
 NKGFP CDTLQSNHLDEETGENISQILDVEPQSFNCKQGKEVLHTPRAGDIQGQLLHSTSSPDGKKEQNTL
 PGTTKTPWEKSSVSQEKEDYFDTNSLALLDFELPDEDFGLLKLEKLKSCSEKLIESPDSKNCGERLPREG
 NHAALEELQRDSETEGLEEELTVPPGEAYRPGPTLRRQPGSKDLSSSIVLFTPADTAAPNDSGRPPPSLC
 SPAFPILGMTPALGSAAGETLSTEAAQPCSTSQPPLLGDNTSLVNNKQCNSACSPKPDNLQASGRQ
 GQPACDSDSGPQATPLPVE SFTFRENQLCGNACLELHEHSTEQTETADRPACDNLNPGNLQLVSELKNPS
 SSSCVSDVSAMWWERAGAKEPCIVTACEDVVSLLWKPLNSLQWEKVHTWHFTEVPVLQIVPVPDVYNLICVA
 LGSLEIREIRALLCSSGDDSEKQVLLKSGDIKAMLGLTKRRLVSSTGTFCNQIQIMTFADDGSSKDEQL
 LMPPDET VLTFAEVQGTQEALLGTTTVNSIVIWNLKTGQLLKKMHIDDSYQASVCHGAYSEKGLLFVVVS
 QPCAKESQALGSPVFQLLVINPKTAQSVGVLLCSLPQQQAGRFLGKVDKDHVAAAVLTSGTIAIWDLLL
 HCTALLPPVSDQSWSLVKWSGTDSHLLAGQKDGNI F IYRYF

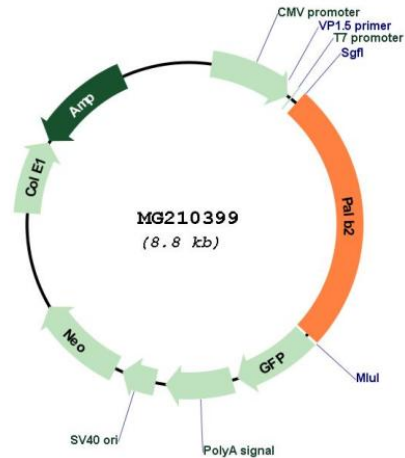
TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



Plasmid Map:


ACCN: BC066140

ORF Size: 2225 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: [BC066140](#), [AAH66140](#)

RefSeq Size: 2568 bp

RefSeq ORF: 2225 bp

Locus ID: 233826

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]