

Datasheet for ABIN3094346

## PALB2 Protein (AA 1-1186) (Strep Tag)



[Go to Product page](#)

### Overview

Quantity:	250 µg
Target:	PALB2
Protein Characteristics:	AA 1-1186
Origin:	Human
Source:	Cell-free protein synthesis (CFPS)
Protein Type:	Recombinant
Purification tag / Conjugate:	This PALB2 protein is labelled with Strep Tag.
Application:	Western Blotting (WB), ELISA, SDS-PAGE (SDS)

### Product Details

Brand:	AliCE®
Sequence:	<p>MDEPPGKPLS CEEKEKLKEK LAFLKREYSK TLARLQRAQR AEKIKHSIKK TVEEQDCLSQ</p> <p>QDLSPQLKHS EPKNKICVYD KLHIKTHLDE ETGEKTSITL DVGPEFNPNG DGPGGGLPIQR</p> <p>TDDTQEHFPH RVSDPSGEQK QKLPSRRKKQ QKRTFISQER DCVFGTDSLRL LSGKRLKEQE</p> <p>EISSKNPARS PVTEIRTHLL SLKSELPDSP EPVTEINEDS VLIPPTAQPE KGVDTFLRRP</p> <p>NFTRATTVPL QTLSDSGSSQ HLEHIPPKGS SELTTHDLKN IRFTSPVSLE AQGKKMTVST</p> <p>DNLLVNKAIS KSGQLPTSSN LEANISCSLN ELTYNNLPAN ENQNLKEQNG TEKSLKSPSD</p> <p>TLDGRNENLQ ESEILSQPKS LSLEATSPLS AEKHSCTVPE GLLFPAEYYV RTTRSMSNCQ</p> <p>RKVAVEAVIQ SHLDVKKKGF KNKNKDASKN LNLSNEETDQ SEIRMSGTCT GQPSSRTSQK</p> <p>LLSLTKVSSP AGPTEDNDLS RKAVAQAPGR RYTGKRKSAC TPASDHCEPL LPTSSLSIVN</p> <p>RSKEEVTSHK YQHEKLFIVV KGKSRHQKE DLSWSNSAY LSLDDDAFTA PFHRDGMLSL</p> <p>KQLLSFLSIT DFQLPDEDFG PLKLEKVKSC SEKPVEPFES KMFGERHLKE GSCIFPEELS</p>

PKRMDTEMED LEEDLIVLPG KSHPKRPNSQ SQHTKTGLSS SILLYTPLNT VAPDDNDRPT  
TDMCSPAIFI LGTTPAFGPQ GSYEKASTEY AGRTCCTPQL AHLKDSVCLA SDTKQFDSSG  
SPAKPHTTLQ VSGRQQQPTC DCDSVPPGTP PPIESFTFKE NQLCRNTCQE LHKHSVEQTE  
TAELPASDSI NPGNLQLVSE LKNPSGSCSV DVSAMFWERA GCKEPCIITA CEDVVSLWKA  
LDAWQWEKLY TWHFAEVPVL QIVPVPDVYN LVCVALGNLE IREIRALFCS SDDSEKQVL  
LKSGNIKAVL GLTKRRLVSS SGTLSDDQVE VMTFAEDGGG KENQFLMPPE ETILTFAEVQ  
GMQEALLGTT IMNNIVIWNL KTGQLLKKMH IDDSYQASVC HKAYSEMGLL FIVLSHPCAK  
ESESRLSPVF QLIVINPKTT LSVGVMYLYCL PPGQAGRFLG GDVKDHCAAA ILTSGTIAIW  
DLLLGQCTAL LPPVSDQHWS FVKWSGTDSH LLAGQKDGNI FVYHYS

**Sequence without tag. The proposed Strep-Tag is based on experience s with the expression system, a different complexity of the protein could make another tag necessary. In case you have a special request, please contact us.**

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### Characteristics:

#### Key Benefits:

- Made in Germany - from design to production - by highly experienced protein experts.
- Protein expressed with ALiCE® and purified in one-step affinity chromatography
- These proteins are normally active (enzymatically functional) as our customers have reported (not tested by us and not guaranteed).
- State-of-the-art algorithm used for plasmid design (Gene synthesis).

This protein is a **made-to-order protein** and will be made for the first time for your order. Our experts in the lab try to ensure that you receive soluble protein.

The big advantage of ordering our **made-to-order proteins** in comparison to ordering custom made proteins from other companies is that there is no financial obligation in case the protein cannot be expressed or purified.

#### Expression System:

- ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from *Nicotiana tabacum* c.v.. This contains all the protein expression machinery needed to produce even the most difficult-to-express proteins, including those that require post-translational modifications.
- During lysate production, the cell wall and other cellular components that are not required for protein production are removed, leaving only the protein production machinery and the mitochondria to drive the reaction. During our lysate completion steps, the additional components needed for protein production (amino acids, cofactors, etc.) are added to produce something that functions like a cell, but without the constraints of a living system - all that's needed is the DNA that codes for the desired protein!

## Product Details

### Concentration:

- The concentration of our recombinant proteins is measured using the absorbance at 280nm.
- The protein's absorbance will be measured against its specific reference buffer.
- We use the Expasy's ProtParam tool to determine the absorption coefficient of each protein.

Purification: One-step Strep-tag purification of proteins expressed in Almost Living Cell-Free Expression System (ALiCE®).

Purity: > 70-80 % as determined by SDS PAGE, Western Blot and analytical SEC (HPLC).

Grade: custom-made

## Target Details

Target: PALB2

Alternative Name: PALB2 ([PALB2 Products](#))

Background: Partner and localizer of BRCA2, FUNCTION: Plays a critical role in homologous recombination repair (HRR) through its ability to recruit BRCA2 and RAD51 to DNA breaks (PubMed:16793542, PubMed:19423707, PubMed:19369211, PubMed:22941656, PubMed:24141787, PubMed:28319063). 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) (PubMed:20871615). Functionally cooperates with RAD51AP1 in promoting of D-loop formation by RAD51 (PubMed:20871616). Serves as the molecular scaffold in the formation of the BRCA1-PALB2-BRCA2 complex which is essential for homologous recombination (PubMed:19369211). 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 (PubMed:24141787). Essential partner of BRCA2 that promotes the localization and stability of BRCA2 (PubMed:16793542). Also enables its recombinational repair and checkpoint functions of BRCA2 (PubMed:16793542). May act by promoting stable association of BRCA2 with nuclear structures, allowing BRCA2 to escape the effects of proteasome-mediated degradation (PubMed:16793542). Binds DNA with high affinity for D loop, which comprises single-stranded, double-stranded and branched DNA structures (PubMed:20871616). 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 (PubMed:24485656). {ECO:0000269|PubMed:16793542, ECO:0000269|PubMed:19369211, ECO:0000269|PubMed:19423707, ECO:0000269|PubMed:20871615,

## Target Details

ECO:0000269|PubMed:20871616, ECO:0000269|PubMed:22941656,  
ECO:0000269|PubMed:24141787, ECO:0000269|PubMed:24485656,  
ECO:0000269|PubMed:28319063}.

Molecular Weight: 131.3 kDa

UniProt: [Q86YC2](#)

Pathways: [DNA Damage Repair](#)

## Application Details

Application Notes: In addition to the applications listed above we expect the protein to work for functional studies as well. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.

Comment: ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from *Nicotiana tabacum* c.v.. This contains all the protein expression machinery needed to produce even the most difficult-to-express proteins, including those that require post-translational modifications.

During lysate production, the cell wall and other cellular components that are not required for protein production are removed, leaving only the protein production machinery and the mitochondria to drive the reaction. During our lysate completion steps, the additional components needed for protein production (amino acids, cofactors, etc.) are added to produce something that functions like a cell, but without the constraints of a living system - all that's needed is the DNA that codes for the desired protein!

Restrictions: For Research Use only

## Handling

Format: Liquid

Buffer: The buffer composition is at the discretion of the manufacturer.  
Standard Storage Buffer: PBS pH 7.4, 10 % Glycerol **Might differ depending on protein.**

Handling Advice: Avoid repeated freeze-thaw cycles.

Storage: -80 °C

Storage Comment: Store at -80°C.

Expiry Date: 12 months