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Datasheet for ABIN3135003
PALB2 Protein (AA 1-1104) (Strep Tag)

Overview

Quantity:	1 mg
Target:	PALB2
Protein Characteristics:	AA 1-1104
Origin:	Mouse
Source:	Tobacco (<i>Nicotiana tabacum</i>)
Protein Type:	Recombinant
Purification tag / Conjugate:	This PALB2 protein is labelled with Strep Tag.
Application:	Western Blotting (WB), ELISA, SDS-PAGE (SDS)

Product Details

Sequence: MEELSGKPLS YAEKEKLKEK LAFLKKEYSR TLARLQRAKR AEKAKNSKKA IEDGVPQPEA
SSQLSHSESI NKGFPCTLQ SNHLDEETGE NISQILDVEP QSFNCKQGKE VLHTPRAGDI
QGQLLHSTSS PDGKKEQNTL PGTTKTPWEK SSVSQEKEDY FDTNSLALLG KHRKGQESIS
RKNSRTPVSE KTHLLSLRSQ IPDPPALVTG IGEGLIPPS GKSERGIDTL VRGNTVSAEA
AVPSCTASNS NHSQHLEHTP PKSGCKITTQ GPASSTNLVA QDQKMTIFTV NSVVKAVRA
HGQLPGSPNS CSVNDLTHSN LPANSTPNSK SLKSPSNTVD ERNEPLQEDE ILGPSKNFNL
AAVSPSTES QIHSCTMLEG LLFPAEYYVR TTRRMSDCQR KIALEAVIQS HLGVKKKELK
KKTAKTAVV LSEEDTDQSE SGMLDTSTGQ SSSGSLSQL LSPAEVSSPP GPAGKATTPP
PGRGHRGKRK SARTSTLGHC QLLFPPCAAL AVNRSGKFT KHKCQNRGVV IHDFFLPDED
FGLLKLEKLEK SCSEKLIESP DSKNCGERLP REGNHAAL EEELTVPPGE
AYRPGPTLRR QPGSKDLSS IVLFTPADTA APNDSGRPPP SLCSPAFFIL GMTPALGSQA
AGETLSTEAA QPCSTSQPPL LGDTNSLVNN SKQCNSSACS PKPDTNLQAS GRQGQPACDS

DSGPQATPLP VESFTFRENQ LCGNACLELH EHSTEQTETA DRPACDNLNP GNLQLVSELK
NPSSSCSVDV SAMWWERAGA KEPCIVTACE DVVSLWKPLN SLQWEKVHTW HFTEVPVLQI
VPVPDVYNLI CVALGSLEIR EIRALLCSSG DDSEKQVLLK SGDIKAMLGL TKRRLVSSTG
TFCNQIQIM TFADDGSSKD EQLLMPPDET VLTFAEVQGT QEALLGTTTV NSIVIWNLKT
GQLLKKMHID DSYQASVCHG AYSEKGLLFV VVSQPCAKES QALGSPVFQL LVINPKTAQS
VGVLLCSLPQ GQAGRFLEGD VKDHVAAAVL TSGTIAIWDL LLGHCTALLP PVSDQSWSLV
KWSGTDSHLL AGQKDGNIIFI YRYF

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.

Characteristics:

Key Benefits:

- Made in Germany - from design to production - by highly experienced protein experts.
- Protein expressed with ALiCE® and purified by multi-step, protein-specific process to ensure correct folding and modification.
- 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 will ensure that you receive a correctly folded 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!

Concentration:

Product Details

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

Purification: Two step purification of proteins expressed in Almost Living Cell-Free Expression System (ALiCE®):

1. In a first purification step, the protein is purified from the cleared cell lysate using StrepTag capture material. Eluate fractions are analyzed by SDS-PAGE.
2. Protein containing fractions of the best purification are subjected to second purification step through size exclusion chromatography. Eluate fractions are analyzed by SDS-PAGE and Western blot.

Purity: ≥ 80 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.

Endotoxin Level: Low Endotoxin less than 1 EU/mg (< 0.1 ng/mg)

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. 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). {ECO:0000250}.

Target Details

Molecular Weight:	119.1 kDa
UniProt:	Q3U0P1
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:	<p>ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from <i>Nicotiana tabacum</i> 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.</p> <p>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!</p>
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	The buffer composition is at the discretion of the manufacturer. If you have a special request, please contact us.
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	Unlimited (if stored properly)