

Datasheet for ABIN3131487
PKD2 Protein (AA 1-966) (Strep Tag)



[Go to Product page](#)

Overview

Quantity:	250 µg
Target:	PKD2
Protein Characteristics:	AA 1-966
Origin:	Mouse
Source:	Cell-free protein synthesis (CFPS)
Protein Type:	Recombinant
Purification tag / Conjugate:	This PKD2 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Brand:	AlIcE®
Sequence:	<p>MVNSRRVQPQ PPGDAGRSPA PRASGPGR LV AGGAGLAVPG GLGEQRGLEI EMERIRQAAA</p> <p>RDPPAGASAS PSPPLSSCSR QAWSRDNPGF EAEEDDDDE VEGEEGGMV EMDVEWRPGS</p> <p>RRSASSAVS SVGARGRLG SYRGAAHLG RRRLEDQGA QCPSPAGGGD PLHRHLPLEG</p> <p>QPPRVAWAER LVRGLRGLWG TRLMEESNAN REKYLKSVLR ELVTYFFLV VLCILTYGMM</p> <p>SSNVYYTTRT LSQFIDTPV SKTEKTNFKT LSSMEDFWKF TEGSFLDGLY WKAQTSNHTQ</p> <p>ADNRSFIFYE NLLLGVPRLR QLRVRNGSCS IPQDLRDEIK ECDVYSVSS EDRAFGPRN</p> <p>GTAWMYTSEK ELNGSSHWGI IASYSAGY LDLSRTREET AAQLAGLRN FWLDRGTRAA</p> <p>FIDFSVYNAN INLFCVRL AEFPATGGV PSWQFQPVKL IRYVTAFFD LAACEIIFCF FIIYYVVEE</p> <p>LEIRIHRLSY FRSFWNCLDV VIVLSVAM VINIYRMSNA EGLLQFLEDQ NSFPNFEHVA</p> <p>YWQIQFNNIS AVMVFLVIK LFKFINFRT MSQSTTMSR CAKDLFGFTI MFSIIFLAYA</p> <p>QLAYLVFGTQ VDDFSTFQEC IFTQFRIILG DINFAEIEEA NRVLGPLYFT TFVFFMFFIL LNMFLAIIND</p>

SYSEVKSDLA QQKAEMELSD LIRKGCQKAL VKLKLKRNTV DAISESLRQG GGKLNFDLRL
QDLKGKGHTD AEIEAIFTKY DQDGDQELTE REHQMRDDL EKEREDLDLE HSSLPRPMSS
RSFPRSLDDS EEEDDEDSGH SSRRRGSISS GVSYEELFQVL VRRVDRMEHS IGSIVSKIDA
VIVKLEIMER AKLKRREVLG RLLDGVAEDA RLGRDSEIHR EQMERLVREE LERWESDDAA
SQTGHGVSTQ VGLGGQPHPR NPRPPSSQSA EGLEGGGGNG SANVHA

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 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!

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.

Product Details

Purification:	One-step Strep-tag purification of proteins expressed in Almost Living Cell-Free Expression System (AliCE®).
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Purity:	> 70-80 % as determined by SDS PAGE, Western Blot and analytical SEC (HPLC).
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Grade:	custom-made
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Target Details

Target:	PKD2
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Alternative Name:	Pkd2 (PKD2 Products)
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Background:	<p>Polycystin-2 (Polycystic kidney disease 2 protein homolog) (Transient receptor potential cation channel subfamily P member 2),FUNCTION: Component of a heteromeric calcium-permeable ion channel formed by PKD1 and PKD2 that is activated by interaction between PKD1 and a Wnt family member, such as WNT3A and WNT9B. Can also form a functional, homotetrameric ion channel (PubMed:27214281). Functions as a cation channel involved in fluid-flow mechanosensation by the primary cilium in renal epithelium (PubMed:12514735, PubMed:18695040, PubMed:27760766, PubMed:31048699). Functions as outward-rectifying K(+) channel, but is also permeable to Ca(2+), and to a much lesser degree also to Na(+) (PubMed:27760766). May contribute to the release of Ca(2+) stores from the endoplasmic reticulum (By similarity). Together with TRPV4, forms mechano- and thermosensitive channels in cilium (PubMed:18695040). PKD1 and PKD2 may function through a common signaling pathway that is necessary to maintain the normal, differentiated state of renal tubule cells (PubMed:9568711, PubMed:10615132). Acts as a regulator of cilium length, together with PKD1. The dynamic control of cilium length is essential in the regulation of mechanotransductive signaling. The cilium length response creates a negative feedback loop whereby fluid shear-mediated deflection of the primary cilium, which decreases intracellular cAMP, leads to cilium shortening and thus decreases flow-induced signaling (PubMed:20096584). Also involved in left-right axis specification via its role in sensing nodal flow, forms a complex with PKD1L1 in cilia to facilitate flow detection in left-right patterning (PubMed:21307093, PubMed:22983710). Detection of asymmetric nodal flow gives rise to a Ca(2+) signal that is required for normal, asymmetric expression of genes involved in the specification of body left-right laterality (PubMed:12062060, PubMed:21307093, PubMed:22983710). {ECO:0000250 UniProtKB:Q13563, ECO:0000269 PubMed:12062060, ECO:0000269 PubMed:12514735, ECO:0000269 PubMed:18695040,</p>
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Target Details

ECO:0000269|PubMed:20096584, ECO:0000269|PubMed:21307093,
ECO:0000269|PubMed:22983710, ECO:0000269|PubMed:27214281,
ECO:0000269|PubMed:27760766, ECO:0000269|PubMed:31048699,
ECO:0000305|PubMed:10615132, ECO:0000305|PubMed:9568711}.

Molecular Weight: 109.0 kDa

UniProt: [O35245](#)

Pathways: [cAMP Metabolic Process](#), [Maintenance of Protein Location](#), [Negative Regulation of Transporter Activity](#)

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.

Handling

Expiry Date: 12 months