Datasheet for ABIN3114704

PKD2 Protein (AA 1-968) (rho-1D4 tag)

1 Image

Go to Product page

Overview

Quantity:	1 mg
Target:	PKD2
Protein Characteristics:	AA 1-968
Origin:	Human
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This PKD2 protein is labelled with rho-1D4 tag.
Application:	ELISA, Western Blotting (WB), Crystallization (Crys), SDS-PAGE (SDS)

Product Details

Sequence:	MVNSSRVQPQ QPGDAKRPPA PRAPDPGRLM AGCAAVGASL AAPGGLCEQR GLEIEMQRIR QAAARDPPAG AAASPSPPLS SCSRQAWSRD NPGFEAEEEE EEVEGEEGGM VVEMDVEWRP GSRRSAASSA VSSVGARSRG LGGYHGAGHP SGRRRRREDQ GPPCPSPVGG GDPLHRHLPL EGQPPRVAWA ERLVRGLRGL WGTRLMEESS TNREKYLKSV LRELVTYLLF LIVLCILTYG MMSSNVYYYT RMMSQLFLDT PVSKTEKTNF KTLSSMEDFW KFTEGSLLDG LYWKMQPSNQ TEADNRSFIF YENLLLGVPR IRQLRVRNGS CSIPQDLRDE IKECYDVYSV SSEDRAPFGP RNGTAWIYTS EKDLNGSSHW GIIATYSGAG YYLDLSRTRE ETAAQVASLK KNVWLDRGTR ATFIDFSVYN ANINLFCVVR LLVEFPATGG VIPSWQFQPL KLIRYVTTFD FFLAACEIIF CFFIFYYVVE EILEIRIHKL HYFRSFWNCL DVVIVVLSVV AIGINIYRTS NVEVLLQFLE DQNTFPNFEH LAYWQIQFNN IAAVTVFFVW IKLFKFINFN RTMSQLSTTM SRCAKDLFGF AIMFFIIFLA YAQLAYLVFG TQVDDFSTFQ ECIFTQFRII LGDINFAEIE EANRVLGPIY FTTFVFFMFF ILLNMFLAII NDTYSEVKSD LAQQKAEMEL SDLIRKGYHK ALVKLKLKKN TVDDISESLR

	QGGGKLNFDE LRQDLKGKGH TDAEIEAIFT KYDQDGDQEL TEHEHQQMRD DLEKEREDLD LDHSSLPRPM SSRSFPRSLD DSEEDDDEDS GHSSRRRGSI SSGVSYEEFQ VLVRRVDRME HSIGSIVSKI DAVIVKLEIM ERAKLKRREV LGRLLDGVAE DERLGRDSEI HREQMERLVR EELERWESDD AASQISHGLG TPVGLNGQPR PRSSRPSSSQ STEGMEGAGG NGSSNVHV **Sequence without tag. Tag location is at the discretion of the manufacturer. If you have a special request, please contact us.**
Characteristics:	• Made in Germany - from design to production - by highly experienced protein experts. • Human PKD2 Protein (raised in Insect Cells) purified by multi-step, protein-specific process to ensure crystallization grade. • 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. In the unlikely event that the protein cannot be expressed or purified we do not charge anything (other companies might charge you for any performed steps in the expression process for custom-made proteins, e.g. fees might apply for the expression plasmid, the first expression experiments or purification optimization). When you order this made-to-order protein you will only pay upon receival of the correctly folded protein. With no financial risk on your end you can rest assured that our experienced protein experts will do everything to make sure that you receive the protein you ordered. 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. The concentration of the protein is calculated using its specific absorption coefficient. We use the Expasy's protparam tool to determine the absorption coefficient of each protein.
Purification:	Three step purification of membrane proteins expressed in baculovirus infected SF9 insect cells: 1. Membrane proteins are fractioned by ultracentrifugation and subsequently solubilized with different detergents (detergent screen). Samples are analyzed by Western blot. 2. The best performing detergent is used for solubilization and the proteins are purified via their rho1D4 tag via two rho1D4 antibody columns: one DTT resistant, the other one not. Eluate fractions are analyzed by Western blot. 3. Protein containing fractions of the best purification are subjected to second purification step through size exclusion chromatograph. Eluate fractions are analyzed by SDS-PAGE and

Product Details

	Western blot.
Purity:	>95 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.
Sterility:	0.22 µm filtered
Endotoxin Level:	Protein is endotoxin-free.
Grade:	Crystallography grade

Target Details

Target:	PKD2
Alternative Name:	PKD2 (PKD2 Products)
Background:	Functions as a calcium permeable cation channel involved in fluid-flow mechanosensation by the primary cilium in renal epithelium. 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 for normal tubulogenesis. 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. Also involved in left/right axis specification downstream of nodal flow: forms a complex with PKD1L1 in cilia to facilitate flow detection in left/right patterning (By similarity). {ECO:0000250|UniProtKB:O35245, ECO:0000269|PubMed:18695040}.
Molecular Weight:	110.9 kDa Including tag.
UniProt:	Q13563
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 gurantee though.
Comment:	In cases in which it is highly likely that the recombinant protein with the default tag will be insoluble our protein lab may suggest a higher molecular weight tag (e.g. GST-tag) instead to

Application Details

	increase solubility. We will discuss all possible options with you in detail to assure that you receive your protein of interest.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	100 mM NaCL, 20 mM Hepes, 10% glycerol. pH value is at the discretion of the manufacturer.
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	Unlimited (if stored properly)

Images

Image 1. „Crystallography Grade“ protein due to multi-step, protein-specific purification process