Datasheet for ABIN7550763

Plakophilin 2 Protein (PKP2) (AA 1-881) (His tag)

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Overview

Quantity:	1 mg
Target:	Plakophilin 2 (PKP2)
Protein Characteristics:	AA 1-881
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This Plakophilin 2 protein is labelled with His tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Purpose:	Custom-made recombinat PKP2 Protein expressed in mammalien cells.
Sequence:	MAAPGAPAEY GYIRTVLGQQ ILGQLDSSSL ALPSEAKLKL AGSSGRGGQT VKSLRIQEQV QQTLARKGRS SVGNGNLHRT SSVPEYVYNL HLVENDFVGG RSPVPKTYDM LKAGTTATYE GRWGRGTAQY SSQKSVEERS LRHPLRRLEI SPDSSPERAH YTHSDYQYSQ RSQAGHTLHH QESRRAALLV PPRYARSEIV GVSRAGTTSR QRHFDTYHRQ YQHGSVSDTV FDSIPANPAL LTYPRPGTSR SMGNLLEKEN YLTAGLTVGQ VRPLVPLQPV TQNRASRSSW HQSSFHSTRT LREAGPSVAV DSSGRRAHLT VGQAAAGGSG NLLTERSTFT DSQLGNADME MTLERAVSML EADHMLPSRI SAAATFIQHE CFQKSEARKR VNQLRGILKL LQLLKVQNED VQRAVCGALR NLVFEDNDNK LEVAELNGVP RLLQVLKQTR DLETKKQITD HTVNLRSRNG WPGAVAHACN PSTLGGQGGR ITRSGVRDQP DQHGLLWNLS SNDKLKNLMI TEALLTLTEN IIIPFSGWPE GDYPKANGLL DFDIFYNVTG CLRNMSSAGA DGRKAMRRCD GLIDSLVHYV RGTIADYQPD DKATENCVCI LHNLSYQLEA ELPEKYSQNI YIQNRNIQTD NNKSIGCFGS RSRKVKEQYQ

Product Details

	DVPMPEEKSN PKGVEWLWHS IVIRMYLSLI AKSVRNYTQE ASLGALQNLT AGSGPMPTSV AQTVVQKESG LQHTRKMLHV GDPSVKKTAI SLLRNLSRNL SLQNEIAKET LPDLVSIIPD TVPSTDLLIE TTASACYTLN NIIQNSYQNA RDLLNTGGIQ KIMAISAGDA YASNKASKAA SVLLYSLWAH TELHHAYKKA QFKKTDFVNS RTAKAYHSLK D **Sequence without tag. The proposed Purification-Tag is based on experiences 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 to order protein - from design to production - by highly experienced protein experts. • Protein expressed in mammalien cells and purified in one-step affinity chromatography • The optimized expression system ensures reliability for intracellular, secreted and transmembrane proteins. • 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. If you are not interested in a full length protein, please contact us for individual protein fragments. 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.
Purity:	> 90 % as determined by Bis-Tris Page, Western Blot
Grade:	custom-made

Target Details

Target:	Plakophilin 2 (PKP2)
Alternative Name:	PKP2 (PKP2 Products)
Background:	Plakophilin-2,FUNCTION: Regulates focal adhesion turnover resulting in changes in focal adhesion size, cell adhesion and cell spreading, potentially via transcriptional modulation of beta-integrins (PubMed:23884246). Required to maintain gingival epithelial barrier function (PubMed:34368962). Required for cardiac sodium current propagation and electrical synchrony in cardiac myocytes, via ANK3 stabilization and modulation of SCN5A/Nav1.5 localization to cell-cell junctions (By similarity). Required for the formation of desmosome cell junctions in

Target Details

	cardiomyocytes, thereby required for the correct formation of the heart, specifically trabeculation and formation of the atria walls (By similarity). Loss of desmosome cell junctions leads to mis-localization of DSP and DSG2 resulting in disruption of cell-cell adhesion and disordered intermediate filaments (By similarity). Modulates profibrotic gene expression in cardiomyocytes via regulation of DSP expression and subsequent activation of downstream TGFB1 and MAPK14/p38 MAPK signaling (By similarity). Required for mitochondrial function, nuclear envelope integrity and positive regulation of SIRT3 transcription via maintaining DES localization at its nuclear envelope and cell tip anchoring points, and thereby preserving regulation of the transcriptional program (PubMed:35959657). Maintenance of nuclear envelope integrity protects against DNA damage and transcriptional dysregulation of genes, especially those involved in the electron transport chain, thereby preserving mitochondrial function and protecting against superoxide radical anion generation (PubMed:35959657). May play a role in junctional plaques (PubMed:22781308). Involved in the inhibition of viral infection by influenza A viruses (IAV) (PubMed:28169297). Acts as a host restriction factor for IAV viral propagation, potentially via disrupting the interaction of IAV polymerase complex proteins (PubMed:28169297). {ECO:0000250|UniProtKB:F1M7L9, ECO:0000250|UniProtKB:Q9CQ73, ECO:0000269|PubMed:22781308, ECO:0000269|PubMed:23884246, ECO:0000269|PubMed:28169297, ECO:0000269|PubMed:34368962, ECO:0000269|PubMed:35959657}.
Molecular Weight:	97.4 kDa
UniProt:	Q99959
Pathways:	Cell-Cell Junction Organization, SARS-CoV-2 Protein Interactome, The Global Phosphorylation Landscape of SARS-CoV-2 Infection

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.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	The buffer composition is at the discretion of the manufacturer.

Handling

Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	12 months