10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

PKP2 / Plakophilin 2 Antibody (Internal)

Goat Polyclonal Antibody
Catalog # ALS15792

Specification

PKP2 / Plakophilin 2 Antibody (Internal) - Product Information

Application	**WB**
Primary Accession	Q99959
Reactivity	**Human, Mouse, Rat, Rabbit, Hamster, Dog**
Host	**Goat**
Clonality	**Polyclonal**
Calculated MW	**97kDa KDa**

PKP2 / Plakophilin 2 Antibody (Internal) - Additional Information

Gene ID 5318

Other Names
Plakophilin-2, PKP2

Target/Specificity
Human PKP2 / Plakophilin 2. This antibody is expected to recognize both reported isoforms (NP_001005242.2; NP_004563.2).

Reconstitution & Storage
Store at -20°C. Minimize freezing and thawing.

Precautions
PKP2 / Plakophilin 2 Antibody (Internal) is for research use only and not for use in diagnostic or therapeutic procedures.

PKP2 / Plakophilin 2 Antibody (Internal) - Protein Information

Name PKP2 (HGNC:9024)

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 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).

Cellular Location
Nucleus. Cell junction, desmosome. Cell junction. Cytoplasm Note=Colocalizes with CTNNA3 and SCN5A/Nav1.5 at intercalated disks in the heart. {ECO:0000250|UniProtKB:Q9CQ73}

Tissue Location
Detected in heart right ventricle (at protein level). Expressed in gingival epithelial, endothelial and fibroblast cells (at protein level) (PubMed:34368962). Faintly expressed in tracheal epithelial cells (at protein level) (PubMed:28169297). Widely expressed. Found at desmosomal plaques in simple and stratified epithelia and in non-epithelial tissues such as myocardium and lymph node follicles. In most stratified epithelia found in the desmosomes of the basal cell layer and seems to be absent from suprabasal strata

PKP2 / Plakophilin 2 Antibody (Internal) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

PKP2 / Plakophilin 2 Antibody (Internal) - Images

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PKP2 antibody (0.3 ug/ml) staining of Mouse Heart lysate (35 ug protein/ml in RIPA buffer).

PKP2 / Plakophilin 2 Antibody (Internal) - Background

May play a role in junctional plaques.

PKP2 / Plakophilin 2 Antibody (Internal) - References

Mertens C.,et al.J. Cell Biol. 135:1009-1025(1996).
Rampazzo A.,et al.Submitted (FEB-2008) to the EMBL/GenBank/DDBJ databases.
Scherer S.E.,et al.Nature 440:346-351(2006).
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Mertens C.,et al.Differentiation 64:277-290(1999).