

PKP2 Antibody (C-term)
Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP12940b

Specification

PKP2 Antibody (C-term) - Product Information

Application	WB, IHC-P,E
Primary Accession	O99959
Other Accession	NP_004563.2
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	97415
Antigen Region	838-866

PKP2 Antibody (C-term) - Additional Information

Gene ID 5318

Other Names

Plakophilin-2, PKP2

Target/Specificity

This PKP2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 838-866 amino acids from the C-terminal region of human PKP2.

Dilution

WB~~1:1000

IHC-P~~1:10~50

Format

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

Storage

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

PKP2 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

PKP2 Antibody (C-term) - Protein Information

Name PKP2 ([HGNC:9024](#))

Function A component of desmosome cell-cell junctions which are required for positive regulation

of cellular adhesion (PubMed:[25208567](#)). 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](#)). Important component of the desmosome that is also required for localization of desmosome component proteins such as DSC2, DSG2 and JUP to the desmosome cell-cell junction (PubMed:[22781308](#), PubMed:[25208567](#)). 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 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 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](#)). Binds single-stranded DNA (ssDNA) (PubMed:[20613778](#)). May regulate the localization of GJA1 to gap junctions in intercalated disks of the heart (PubMed:[18662195](#)). 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

Expressed at intercalated disks in the heart (at protein level) (PubMed:18662195). 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.

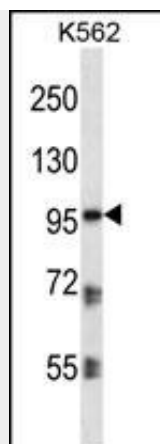
PKP2 Antibody (C-term) - Protocols

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

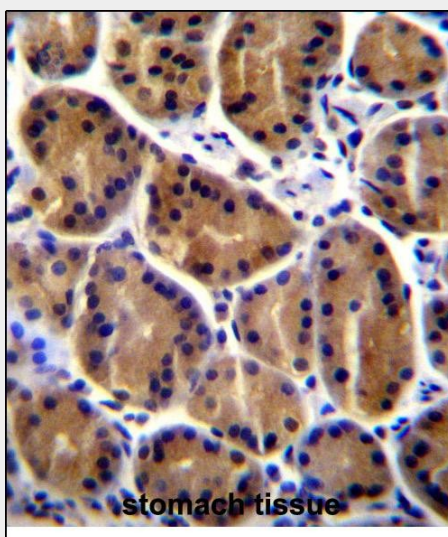
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

PKP2 Antibody (C-term) - Images





PKP2 Antibody (C-term) (Cat. #AP12940b) western blot analysis in K562 cell line lysates (35ug/lane). This demonstrates the PKP2 antibody detected the PKP2 protein (arrow).



PKP2 Antibody (C-term) (Cat. #AP12940b) immunohistochemistry analysis in formalin fixed and paraffin embedded human stomach tissue followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of PKP2 Antibody (C-term) for immunohistochemistry. Clinical relevance has not been evaluated.

PKP2 Antibody (C-term) - Background

This gene encodes a member of the arm-repeat (armadillo) and plakophilin gene families. Plakophilin proteins contain numerous armadillo repeats, localize to cell desmosomes and nuclei, and participate in linking cadherins to intermediate filaments in the cytoskeleton. This gene product may regulate the signaling activity of beta-catenin. Two alternately spliced transcripts encoding two protein isoforms have been identified. A processed pseudogene with high similarity to this locus has been mapped to chromosome 12p13.

PKP2 Antibody (C-term) - References

Fressart, V., et al. *Europace* 12(6):861-868(2010)
Cox, M.G., et al. *Circ Arrhythm Electrophysiol* 3(2):126-133(2010)
Christensen, A.H., et al. *Cardiology* 115(2):148-154(2010)

den Haan, A.D., et al. Circ Cardiovasc Genet 2(5):428-435(2009)
Bhuiyan, Z.A., et al. Circ Cardiovasc Genet 2(5):418-427(2009)