

Datasheet for ABIN1386389

**anti-Plakophilin 2 antibody (AA 801-881)**[Go to Product page](#)**1** Validation**2** Images**1** Publication

## Overview

Quantity:	100 µL
Target:	Plakophilin 2 (PKP2)
Binding Specificity:	AA 801-881
Reactivity:	Human
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This Plakophilin 2 antibody is un-conjugated
Application:	ELISA, Immunohistochemistry (Paraffin-embedded Sections) (IHC (p)), Immunocytochemistry (ICC), Immunohistochemistry (Frozen Sections) (IHC (fro)), Immunofluorescence (Cultured Cells) (IF (cc)), Immunofluorescence (Paraffin-embedded Sections) (IF (p))

## Product Details

Immunogen:	KLH conjugated synthetic peptide derived from human Plakophilin 2
Isotype:	IgG
Cross-Reactivity:	Human
Predicted Reactivity:	Mouse,Rat,Dog,Cow,Sheep,Pig,Horse,Rabbit
Purification:	Purified by Protein A.

## Target Details

Target:	Plakophilin 2 (PKP2)
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## Target Details

Alternative Name:	Plakophilin 2 ( <a href="#">PKP2 Products</a> )
Background:	<p>Synonyms: ARVD 9, ARVD-9, ARVD9, PKP 2, PKP2, PKP-2, Plakophilin-2. Plakophilin2, PKP2_HUMAN.</p> <p>Background: Plakophilins 1, 2, 3 and 4 (PKP1-4) influence development and participate in linking cadherins to cytoskeletal intermediate filaments. Plakophilins 1-4 contain arm-repeat (armadillo) domains, and localize to nuclei and cell desmosomes (cell-cell junctions found in suprabasal layers of stratifying epithelia that undergo mechanical stress). Plakophilin-1 mediates increases in desmosomal protein content, desmosome assembly, and regulation of cell migration. Plakophilin-2 is important for desmosome assembly and is an essential morphogenic factor and architectural component of the heart. Plakophilin-3 plays a role in both desmosome-dependent adhesion and signaling pathways. Plakophilin-4 is a component of desmosomal adhesion plaques that regulates junctional plaque organization and cadherin function.</p>
Gene ID:	5318
UniProt:	<a href="#">Q99959</a>
Pathways:	<a href="#">Cell-Cell Junction Organization</a> , <a href="#">SARS-CoV-2 Protein Interactome</a> , <a href="#">The Global Phosphorylation Landscape of SARS-CoV-2 Infection</a>

## Application Details

Application Notes:	ELISA 1:500-1000 IHC-P 1:200-400 IHC-F 1:100-500 IF(IHC-P) 1:50-200 IF(IHC-F) 1:50-200 IF(ICC) 1:50-200 ICC 1:100-500
Restrictions:	For Research Use only

## Handling

Format:	Liquid
Concentration:	1 µg/µL
Buffer:	0.01M TBS( pH 7.4) with 1 % BSA, 0.02 % Proclin300 and 50 % Glycerol.

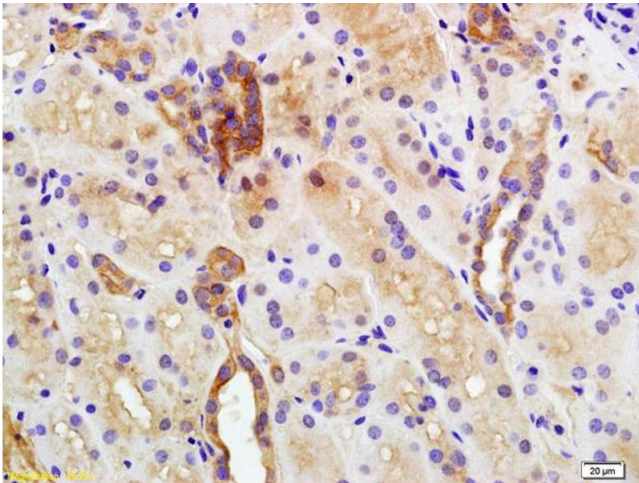
## Handling

Preservative:	ProClin
Precaution of Use:	This product contains ProClin: a POISONOUS AND HAZARDOUS SUBSTANCE, which should be handled by trained staff only.
Storage:	4 °C,-20 °C
Storage Comment:	Shipped at 4°C. Store at -20°C for one year. Avoid repeated freeze/thaw cycles.
Expiry Date:	12 months

## Publications

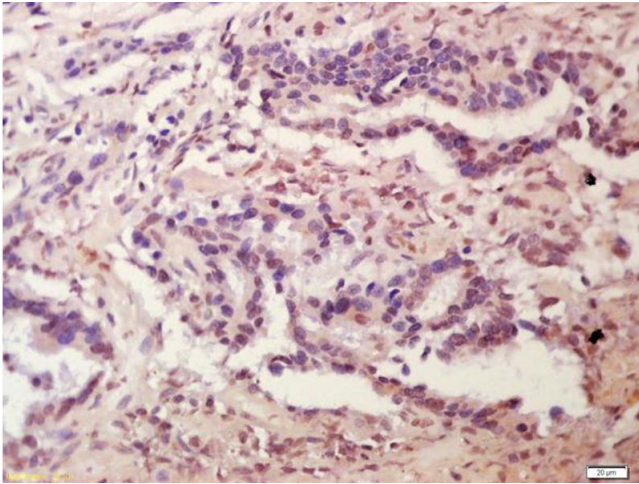
Product cited in:	Akdis, Medeiros-Domingo, Gaertner-Rommel, Kast, Enseleit, Bode, Klingel, Kandolf, Renois, Andreoletti, Akdis, Milting, Lüscher, Brunckhorst, Saguner, Duru: "Myocardial expression profiles of candidate molecules in patients with arrhythmogenic right ventricular cardiomyopathy/dysplasia compared to those with dilated cardiomyopathy and healthy controls." in: <b>Heart rhythm</b> , Vol. 13, Issue 3, pp. 731-41, (2016) ( <a href="#">PubMed</a> ).
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## Validation report #103656 for Immunofluorescence (IF)



### Immunohistochemistry

**Image 1.** Formalin-fixed and paraffin embedded human kidney labeled with Anti-Plakophilin 2 Polyclonal Antibody, Unconjugated (ABIN1386389) at 1:200 followed by conjugation to the secondary antibody and DAB staining



### Immunohistochemistry

**Image 2.** Formalin-fixed and paraffin embedded human colon carcinoma labeled with Anti-Plakophilin 2 Polyclonal Antibody, Unconjugated (ABIN1386389) at 1:200 followed by conjugation to the secondary antibody and DAB staining



## Successfully validated (Immunofluorescence (IF))

by [Gencardio \(IDIBGI\)](#)

Report Number: 103656

Date: Mar 13 2019

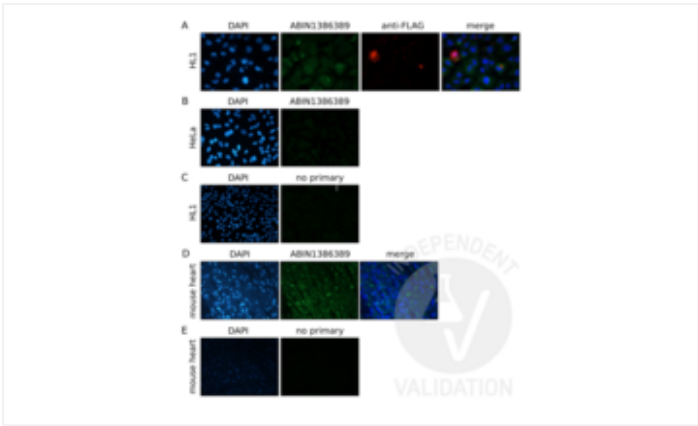
Target:	PKP2
Lot Number:	AD102900
Method validated:	Immunofluorescence (IF)
Positive Control:	HL1 cells HeLa cells mouse heart tissue
Negative Control:	HL1 cells HeLa cells secondary antibody only control
Notes:	ABIN1386389 specifically labels the targeted antigen in mouse heart. No signal was detected in sample negative control and the secondary antibody only control.
Primary Antibody:	ABIN1386389
Secondary Antibody:	goat anti-rabbit AF488 antibody (Invitrogen, A11008, 1911238)
Protocol:	<ul style="list-style-type: none"> <li>HL1 and HeLa cells <ul style="list-style-type: none"> <li>Grow HL1 cells in Claycomb medium (sigma, 51800C, SLBX8700) supplemented with 10% FBS (Gibco, 10270-106, 42G5178K), 1% Penicillin-Streptomycin (Sigma, P4333, lot 048M4874V) and 1% Glutamax (Gibco, 35050-061, lot 2037045), at 37°C and 5% CO<sub>2</sub> in 12mm coverslips in a well of 12 well plate.</li> <li>Grow HeLa cells in MEM/EBSS medium (GE Life Science, SH30244.01, lot AC14563283) supplemented with 10% FBS (Gibco, 10270-106, lot 42G5178K), 1% Penicillin-Streptomycin (Sigma, P4333, lot 048M4874V) and 1% Glutamax (Gibco, 35050-061, lot 2037045), at 37°C and 5% CO<sub>2</sub> in 12mm coverslips in a well of 12 well plate.</li> <li>Transfect HeLa cells with PKP2a plasmid (p915 PKP2a-pFLAG-cmv5a, provided by Dr. Green K.J) using Lipofectamine 3000 (Invitrogen, L3000-015, lot 2041107) following the manufacturer's instructions.</li> <li>Wash cells 1x with PBS.</li> <li>Fix cells on coverslips in 4% PFA for 20min at RT.</li> <li>Wash cells 3x for 5min with PBS.</li> <li>Incubate coverslips with quench solution (PBS with 75mM glycine and 20mM NH<sub>4</sub>Cl) for</li> </ul> </li> </ul>

- 10min at RT.
- Wash cells 1x with PBS.
- Permeabilize cells and block non-specific binding with PFS-like buffer containing 0.1% BSA, 0.1% triton and 0.02% NaN<sub>3</sub> for 30min at 37°C.
- Incubate cells with primary anti-Plakophilin 2 (PKP2) (AA 831-881) antibody (antibodies-online, ABIN1386389, lot AD102900) diluted 1:60 in PFS-like buffer or with anti-Flag-tag antibody (Sigma, monoclonal anti-flag, F316, lot SLBT7654) diluted 1:400 in PFS-like buffer ON at 4°C.
- Wash cells 3x for 5min with PBS.
- Incubate cells with secondary goat anti-rabbit AF488 antibody (Invitrogen, A11008, lot 1911238) or with secondary goat anti-mouse AF568 antibody (Invitrogen, A11031, lot 1841757) diluted 1:200 in PFS-like buffer for 30min at RT.
- Wash cells 2x for 5min with PFS-like buffer.
- Wash cells 2x for 5min with PBS.
- DAPI counterstain for 5min at RT.
- Mount coverslips on glass slides in Calbicochem (Millipore, 345789, lot 2682585).
- Image acquisition with NIS-ELEMENTS (Nikon).
- Tissue: mouse heart
  - Obtain mouse heart mouse and wash it with PBS.
  - Fix tissue in 15ml falcon tube with 4% PFA ON at 4°C.
  - Wash the fixed heart with water.
  - Embed tissue in paraffin.
  - Cut the tissue using a microtome and put it into slides.
  - Desparaffinize the tissue in the slide (from xylene to water).
  - Incubate the slides with retrieval solution for 30min at 95°C to permeabilize the tissue.
  - Cool slides down on ice.
  - Wash tissue 2x for 3min with PBS.
  - Wash tissue 2x for 3min with PBS 0.1% triton.
  - Block non-specific binding with PBS 0.1% triton 10% BSA for 1h at RT.
  - Incubate tissue with primary anti-PKP2 (AA 831-881) antibody (antibodies-online, ABIN1386389, lot AD102900) diluted 1:100 in PBS 1% BSA solution ON at 4°C.
  - Wash tissue 2x for 5min with PBS 0.1% triton.
  - Incubate tissue with secondary goat anti-rabbit AF488 antibody (Invitrogen, A11008, 1911238) diluted 1:200 in PBS 1% BSA solution for 1h at RT.
  - Wash cells 2x for 5min with PBS.
  - Wash tissue 2x for 3min with PBS 0.1% triton.
  - Wash tissue 2x for 3min with PBS.
  - DAPI counterstain for 5min at RT.
  - Mount slides with coverslips in Calbicochem (Millipore, 345789, lot 2682585).
  - Image acquisition with NIS-ELEMENTS (Nikon).

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Experimental Notes:	ABIN1386389 did not label recombinantly expressed PKP2-FLAG in transfected HL1 cells. A hypothesis could be that antibody recognizes the murine protein in mouse heart samples but not the human sequence of the vector (transfected HL1).
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**Validation image no. 1 for anti-Plakophilin 2 (PKP2) (AA 801-881) antibody (ABIN1386389)**

A. IF staining of cells expressing PKP2-FLAG using ABIN1386389 (green) or an anti-FLAG-tag antibody (red). Nuclear staining with DAPI (blue) (magnification 60x). B. Staining of HeLa cells not expressing PKP2-FLAG using ABIN1386389 (magnification 40x). C. Staining of cells expressing PKP2-Flag with a secondary antibody only (magnification 40x). D and E. Staining of endogenous Pkp2 in mouse heart tissue with ABIN1386389 (D) or secondary antibody only (E) (magnification 40x).