

## Product datasheet

anti-Plakophilin 2 mouse monoclonal, PP2/62 + PP2/86 + PP2/150, supernatant

### Short overview

<b>Cat. No.</b>	651101
<b>Quantity</b>	5 ml

### Product description

<b>Host</b>	Mouse
<b>Antibody Type</b>	Monoclonal
<b>Isotype</b>	IgG1
<b>Clone</b>	PP2/62 + PP2/86 + PP2/150
<b>Immunogen</b>	Synthetic carboxyterminal peptide (24 aa) of human plakophilin 2
<b>Formulation</b>	Contains 0.09% sodium azide
<b>UniprotID</b>	A0A3Q1M2G3 (Bovine), Q99959 (Human), Q562C0 (Rat)
<b>Synonym</b>	Plakophilin-2, PKP2
<b>Conjugate</b>	Unconjugated
<b>Purification</b>	Hybridoma cell culture supernatant
<b>Storage</b>	Short term at 2-8°C; long term storage in aliquots at -20°C; avoid freeze/thaw cycles
<b>Intended use</b>	Research use only
<b>Application</b>	IHC, WB
<b>Reactivity</b>	Human, Rat

### Applications

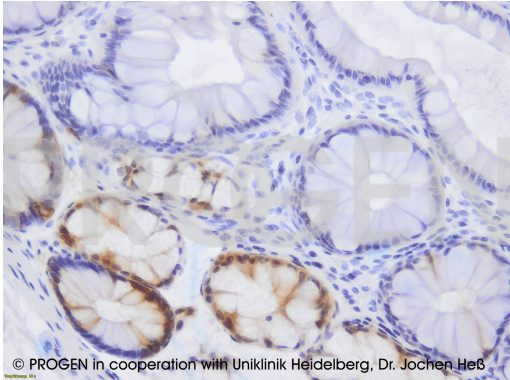
<b>Immunohistochemistry (IHC) - frozen</b>	1:2-1:50 (incubate for 5 min in PBS plus 0.2% Triton-X100 prior to antibody application; longer incubation could result in a loss of nuclear staining; fixation with 2% formaldehyde is recommended; exclusive nuclear staining without detergent)
<b>Immunohistochemistry (IHC) - paraffin</b>	1:2-1:50 (microwave treatment recommended)
<b>Western Blot (WB)</b>	1:50-1:100

### Background

The mabs react with plakophilin 2, a member of the arm-repeat family of proteins which can occur in at least 2 splice forms (2a and 2b). Plakophilin 2 assembles with other proteins to form the desmosomal plaque in simple and glandular epithelia, the basal layer of certain stratified epithelia, all layers of some stratified epithelia, and in nonepithelial desmosome-possessing tissues such as myocardium, Purkinje fibers, and dendritic reticulum of lymph node follicles. In all these cells, including a variety of cell types devoid of desmosomes, plakophilin 2 is highly enriched in the karyoplasm. Polypeptide reacting: Plakophilin 2, Mr 100 kDa (SDS-PAGE); MW calculated from aa sequence: 92,750 (pI 9.33) and 97,410 (pI 9.38).

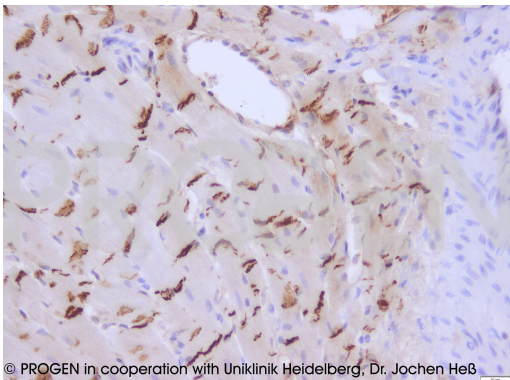
Tumors specifically detected: positive staining was obtained with several carcinomas derived from simple-type epithelia (e.g. hepatomas, colon carcinomas) and some adenocarcinomas derived from stratified epithelia (oesophagus carcinoma). The antibody was negative with all leiomyosarcomas tested.

## Product images



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IHC of human colon (courtesy of J.Heß, University Hospital Heidelberg)



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IHC of rat heart (courtesy of J.Heß, University Hospital Heidelberg)

## References

Publication	Species	Application
<a href="#">Janz A. et al. CRISPR/Cas9-edited PKP2 knock-out (JMU001-A-2) and DSG2 knock-out (JMU001-A-3) iPSC lines as an isogenic human model system for arrhythmogenic cardiomyopathy (ACM)., Stem Cell Res, 53, 102256, (2021).</a>	human	IHC/IF, WB, FACS
<a href="#">Wanuske, M. T. et al. Clustering of desmosomal cadherins by desmoplakin is essential for cell-cell adhesion., Acta Physiol (Oxf) 231, e13609, (2021).</a>	human	WB
<a href="#">Hamada, Y. et al. G790del mutation in DSC2 alone is insufficient to develop the pathogenesis of ARVC in a mouse model. Biochem Biophys Rep. 21, 100711(2020).</a>	mouse	IHC/IF, WB
<a href="#">Merkel, C. et al. Vinculin anchors contractile actin to the cardiomyocyte adherens junction. Mol.Biol.Cell. 30, 2639-2650 (2019)</a>	mouse	IHC (paraffin)
<a href="#">Li, Y. et al. The N-cadherin interactome in primary cardiomyocytes as defined using quantitative proximity proteomics. J.Cell.Sci. 132, (2019)</a>	mouse	ICC-IF