

# plakophilin 1 (3G250): sc-71900

## 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.

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: PKP1 (human) mapping to 1q32.1; Pkp1 (mouse) mapping to 1 E4.

## SOURCE

plakophilin 1 (3G250) is a mouse monoclonal antibody raised against the N-terminus of plakophilin 1 of human origin, epitope mapping to amino acids 1-27 of human plakophilin 1.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

plakophilin 1 (3G250) is recommended for detection of plakophilin 1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500); non cross-reactive with plakophilin 2 or 3.

Suitable for use as control antibody for plakophilin 1 siRNA (h): sc-43180, plakophilin 1 siRNA (m): sc-43181, plakophilin 1 shRNA Plasmid (h): sc-43180-SH, plakophilin 1 shRNA Plasmid (m): sc-43181-SH, plakophilin 1 shRNA (h) Lentiviral Particles: sc-43180-V and plakophilin 1 shRNA (m) Lentiviral Particles: sc-43181-V.

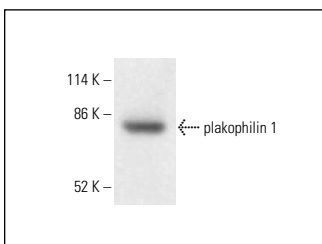
Molecular Weight of plakophilin 1: 75 kDa.

Positive Controls: A549 cell lysate: sc-2413, Caco-2 cell lysate: sc-2262 or A-431 whole cell lysate: sc-2201.

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



plakophilin 1 (3G250): sc-71900. Western blot analysis of plakophilin 1 expression in A-431 whole cell lysate. Detection reagent used: m-IgG Fc BP-HRP: sc-525409.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.