

plakophilin 3 (S-16): sc-68749

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 3 (PKP3) is a 797 amino acid protein that contains 8 arm-repeats and belongs to the β -catenin family. Encoded by a gene that maps to human chromosome 11p15.5, plakophilin 3 localizes to desmosomes of most simple and nearly all stratified epithelia, as well as cell lines derived therefrom, with the exception of hepatocytes and hepatocellular carcinoma cells. plakophilin 3 plays a role in both desmosome-dependent adhesion and signaling pathways, and may play a role in junctional plaques. Up-regulation of plakophilin 3 is a frequent and important feature of lung carcinogenesis, implicating plakophilin 3 as a candidate prognostic marker and therapeutic target for lung cancer.

REFERENCES

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- Bonné, S., Gilbert, B., Hatzfeld, M., Chen, X., Green, K.J. and van Roy, F. 2003. Defining desmosomal plakophilin-3 interactions. *J. Cell Biol.* 161: 403-416.
- Furukawa, C., Daigo, Y., Ishikawa, N., Kato, T., Ito, T., Tsuchiya, E., Sone, S. and Nakamura, Y. 2005. Plakophilin 3 oncogene as prognostic marker and therapeutic target for lung cancer. *Cancer Res.* 65: 7102-7110.

CHROMOSOMAL LOCATION

Genetic locus: PKP3 (human) mapping to 11p15.5; Pkp3 (mouse) mapping to 7 F5.

SOURCE

plakophilin 3 (S-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of plakophilin 3 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-68749 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

plakophilin 3 (S-16) is recommended for detection of plakophilin 3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

plakophilin 3 (S-16) is also recommended for detection of plakophilin 3 in additional species, including equine and porcine.

Suitable for use as control antibody for plakophilin 3 siRNA (h): sc-62826, plakophilin 3 siRNA (m): sc-62827, plakophilin 3 shRNA Plasmid (h): sc-62826-SH, plakophilin 3 shRNA Plasmid (m): sc-62827-SH, plakophilin 3 shRNA (h) Lentiviral Particles: sc-62826-V and plakophilin 3 shRNA (m) Lentiviral Particles: sc-62827-V.

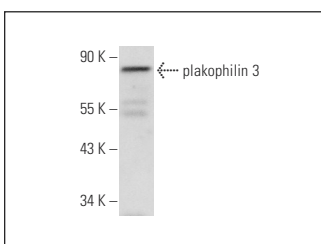
Molecular Weight of plakophilin 3: 87 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, A549 cell lysate: sc-2413 or Caco-2 cell lysate: sc-2262.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



plakophilin 3 (S-16): sc-68749. Western blot analysis of plakophilin 3 expression in HeLa whole cell lysate.

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.