SANTA CRUZ BIOTECHNOLOGY, INC.

# PDZK1 (E-9): sc-390964

SANTA CRUZ BIOTECHNOLOGY

*The Power to Question*

## BACKGROUND

Proteins containing PDZ domains play a role in a wide array of biological functions including protein scaffolding, organization of ion channels, and signal transduction. The PDZ domain containing protein PDZK1 interacts with multiple targets, including MAP17 and cMOAT and also NaPi-IIa, which implicates PDZK1 in ion channel formation. PDZK1 localizes to the plasma membrane of epithelial cells, where it is able to interact simultaneously with more than one type of channel, by utilizing its four PDZ domains, and thus acts as an adaptor between different cell surface receptors. Furthermore, PDZK1 is markedly upregulated in human carcinomas of epithelial origin, and the cluster formed by its association with cMOAT and MAP17 may potentially play role in multidrug resistance. Therefore, PDZK1 may be a new target for cancers cells resistance to chemotherapeutic agents.

## REFERENCES


1. Kocher, O., et al. 1999. PDZK1, a novel PDZ domain-containing protein up-regulated in carcinomas and mapped to chromosome 1q21, interacts with cMOAT (MRP2), the multidrug resistance-associated protein. Lab. Invest. 79: 1161-1170.
2. Kocher, O., et al. 2003. Targeted disruption of the PDZK1 gene by homologous recombination. Mol. Cell. Biol. 23: 1175-1180.
3. Gisler, S.M., et al. 2003. PDZK1: I. a major scaffolder in brush borders of proximal tubular cells. Kidney Int. 64: 1733-1745.
4. Gentzsch. M., et al. 2003. The PDZ-binding chloride channel ClC-3B localizes to the Golgi and associates with cystic fibrosis transmembrane conductance regulator-interacting PDZ proteins. J. Biol. Chem. 278: 6440-6449.


## CHROMOSOMAL LOCATION

Genetic locus: PDZK1 (human) mapping to 1q21.1; Pdzk1 (mouse) mapping to 3 F2.1.

## SOURCE

PDZK1 (E-9) is a mouse monoclonal antibody raised against amino acids 51-97 mapping near the N-terminus of PDZK1 of human origin.

## PRODUCT

Each vial contains 200 µg $IgG_1$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PDZK1 (E-9) is available conjugated to agarose (sc-390964 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-390964 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390964 PE), fluorescein (sc-390964 FITC), Alexa Fluor® 488 (sc-390964 AF488), Alexa Fluor® 546 (sc-390964 AF546), Alexa Fluor® 594 (sc-390964 AF594) or Alexa Fluor® 647 (sc-390964 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390964 AF680) or Alexa Fluor® 790 (sc-390964 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

## STORAGE

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

## APPLICATIONS

PDZK1 (E-9) is recommended for detection of PDZK1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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).

Suitable for use as control antibody for PDZK1 siRNA (h): sc-106840, PDZK1 siRNA (m): sc-152145, PDZK1 shRNA Plasmid (h): sc-106840-SH, PDZK1 shRNA Plasmid (m): sc-152145-SH, PDZK1 shRNA (h) Lentiviral Particles: sc-106840-V and PDZK1 shRNA (m) Lentiviral Particles: sc-152145-V.

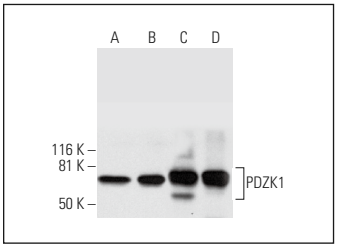
Molecular Weight of PDZK1: 63/70 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, human liver extract: sc-363766 or mouse kidney extract: sc-2255.

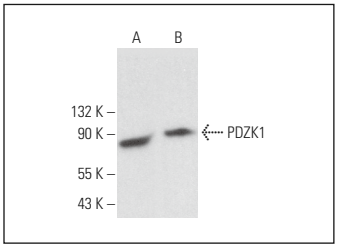
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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




PDZK1 (E-9): sc-390964. Western blot analysis of PDZK1 expression in MCF7 whole cell lysate (**A**) and human liver (**B**), mouse kidney (**C**) and human kidney (**D**) tissue extracts.




PDZK1 (E-9): sc-390964. Western blot analysis of PDZK1 expression in Hep G2 (**A**) and T-47D (**B**) whole cell lysates.

## SELECT PRODUCT CITATIONS


1. Dong, F., et al. 2021. Hypoxia-dependent expression of MAP17 coordinates the Warburg effect to tumor growth in hepatocellular carcinoma. J. Exp. Clin. Cancer Res. 40: 121.


## RESEARCH USE

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