SANTA CRUZ BIOTECHNOLOGY, INC.

PDZK1 (H-1): sc-390932

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 (known as Diphor-1 in rat) 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 (mouse) mapping to 3 F2.1.

SOURCE

PDZK1 (H-1) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 419-446 near the C-terminus of PDZK1 of mouse 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.

Blocking peptide available for competition studies, sc-390932 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

APPLICATIONS

PDZK1 (H-1) is recommended for detection of PDZK1 of mouse and rat origin and Diphor-1 of rat 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 (m): sc-152145, PDZK1 siRNA (m): sc-152145-SH and PDZK1 siRNA (m): sc-152145-V.

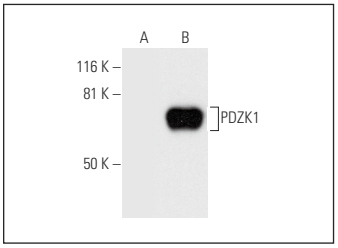
Molecular Weight of PDZK1: 63/70 kDa.

Positive Controls: PDZK1 (m): 293T Lysate: sc-122475 or mouse kidney extract: sc-2255.

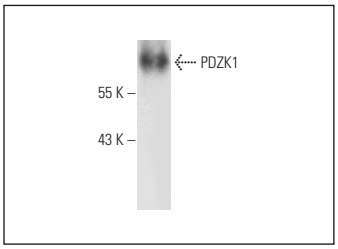
RECOMMENDED SUPPORT REAGENTS

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 (H-1): sc-390932. Western blot analysis of PDZK1 expression in non-transfected: sc-117752 (**A**) and mouse PDZK1 transfected: sc-122475 (**B**) 293T whole cell lysates.



PDZK1 (H-1): sc-390932. Western blot analysis of PDZK1 expression in mouse kidney tissue extract.

RESEARCH USE

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