

PDZK2 (D-16): sc-82687

BACKGROUND

The eukaryotic PDZ domain is a multifunctional protein-protein interacting motif that is found in a variety of proteins and is involved in both the clustering of signaling molecules and the organization of protein networks. PDZK2, also known as PDZD3 (PDZ domain containing 3), IKEPP or NHERF4, is a 571 amino acid protein that localizes to both the cytoplasm and the cell membrane and contains four PDZ domains. Expressed in kidney and in the gastrointestinal tract, PDZK2 functions as a regulatory protein that interacts with GC-C and, via this interaction, negatively regulates the heat-stable enterotoxin-mediated activation of GC-C. PDZK2 exists as multiple alternatively spliced isoforms that are encoded by a gene which maps to human chromosome 11, which houses over 1,400 genes and comprises nearly 4% of the human genome. Jervell and Lange-Nielsen syndrome, Jacobsen syndrome, Niemann-Pick disease, hereditary angioedema and Smith-Lemli-Opitz syndrome are associated with defects in genes that maps to chromosome 11.

REFERENCES

1. Scott, R.O., et al. 2002. A novel PDZ protein regulates the activity of guanylyl cyclase C, the heat-stable enterotoxin receptor. *J. Biol. Chem.* 277: 22934-22941.
2. Vaandrager, A.B. 2002. Structure and function of the heat-stable enterotoxin receptor/guanylyl cyclase C. *Mol. Cell. Biochem.* 230: 73-83.
3. Hegedüs, T., et al. 2003. C-terminal phosphorylation of MRP2 modulates its interaction with PDZ proteins. *Biochem. Biophys. Res. Commun.* 302: 454-461.
4. Online Mendelian Inheritance in Man, OMIM[™]. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 607146. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: PDZD3 (human) mapping to 11q23.3; Pdz3 (mouse) mapping to 9 A5.2.

SOURCE

PDZK2 (D-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of PDZK2 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-82687 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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.

APPLICATIONS

PDZK2 (D-16) is recommended for detection of PDZK2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with family member PDZK1.

Suitable for use as control antibody for PDZK2 siRNA (h): sc-76102, PDZK2 siRNA (m): sc-76103, PDZK2 shRNA Plasmid (h): sc-76102-SH, PDZK2 shRNA Plasmid (m): sc-76103-SH, PDZK2 shRNA (h) Lentiviral Particles: sc-76102-V and PDZK2 shRNA (m) Lentiviral Particles: sc-76103-V.

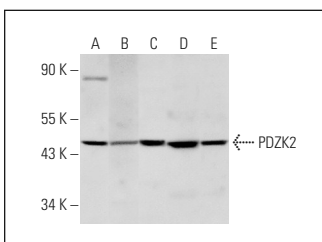
Molecular Weight of PDZK2: 61 kDa.

Positive Controls: mouse kidney extract: sc-2255, HEK293 whole cell lysate: sc-45136 or ZR-75-1 cell lysate: sc-2241.

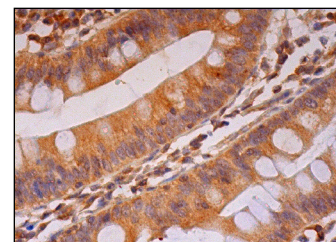
RECOMMENDED SECONDARY REAGENTS

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. 4) Immunohistochemistry: use ImmunoCruz[™]: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



PDZK2 (D-16): sc-82687. Western blot analysis of PDZK2 expression in mouse kidney (A) and mouse colon (B) tissue extracts and U-251-MG (C), HEK293 (D) and ZR-75-1 (E) whole cell lysates.



PDZK2 (D-16): sc-82687. Immunoperoxidase staining of formalin fixed, paraffin-embedded human small intestine tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Reid, H.M., et al. 2012. Interaction of the human prostacyclin receptor and the NHERF4 family member intestinal and kidney enriched PDZ protein (IKEPP). *Biochim. Biophys. Acta* 1823: 1998-2012.