

PDZK11 (P-20): sc-243769

BACKGROUND

PDZK11 (PDZ domain containing 11), also known as PISP, AIPP1 or PDZD11, is a 140 amino acid phosphoprotein that contains one PDZ (DHR) domain with short N- and C-terminal extensions. 15 C-terminal amino acids of PDZK11 are necessary for ATP7A binding, and PDZK11 also interacts with ATP71. PDZK11 is known to interact with plasma membrane Ca²⁺-ATPase (PMCA) and menkes copper ATPase (AIPP1), and undergoes a substantial increase in tyrosine phosphorylation following Insulin treatment, strongly implicating PDZK11 in calcium signaling as part of Insulin cascading. PDZK11 is a potential calcium ATPase binding protein that interacts with proteins involved in calcium homeostasis. An early activation profile of PDZK11 showing high fold change suggests a direct function in initial Insulin signaling, which may be linked to the acute effects of Insulin on calcium flux. Ubiquitously expressed, with highest levels in kidney, liver and skeletal muscle, PDZK11 contains seven exons and exists as two alternatively spliced isoforms. PDZK11 is encoded by a gene that maps to human chromosome Xq13.1.

REFERENCES

- Goellner, G.M., DeMarco, S.J. and Strehler, E.E. 2003. Characterization of PISP, a novel single-PDZ protein that binds to all plasma membrane Ca²⁺-ATPase β -splice variants. *Ann. N.Y. Acad. Sci.* 986: 461-471.
- Stephenson, S.E., Dubach, D., Lim, C.M., Mercer, J.F. and La Fontaine, S. 2005. A single PDZ domain protein interacts with the Menkes copper ATPase, ATP7A. A new protein implicated in copper homeostasis. *J. Biol. Chem.* 280: 33270-33279.
- Lee, S.F., Kelly, M., McAlister, A., Luck, S.N., Garcia, E.L., Hall, R.A., Frankel, G., Robins-Browne, R.M. and Hartland, E.L. 2008. A C-terminal class I PDZ binding motif of EspI/NleA modulates the virulence of attaching and effacing *Escherichia coli* and *Citrobacter rodentium*. *Cell. Microbiol.* 10: 499-513.
- Chen, X. and Hess, S. 2008. Adipose proteome analysis: focus on mediators of Insulin resistance. *Expert Rev. Proteomics* 5: 827-839.
- Watanabe, T., Totoki, Y., Toyoda, A., Kaneda, M., Kuramochi-Miyagawa, S., Obata, Y., Chiba, H., Kohara, Y., Kono, T., Nakano, T., Surani, M.A., Sasaki, Y. and Sasaki, H. 2008. Endogenous siRNAs from naturally formed dsRNAs regulate transcripts in mouse oocytes. *Nature* 453: 539-543.

CHROMOSOMAL LOCATION

Genetic locus: PDZD11 (human) mapping to Xq13.1; Pdzd11 (mouse) mapping to X C3.

SOURCE

PDZK11 (P-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of PDZK11 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-243769 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PDZK11 (P-20) is recommended for detection of PDZK11 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 other PDZK family members.

PDZK11 (P-20) is also recommended for detection of PDZK11 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for PDZK11 siRNA (h): sc-91243, PDZK11 siRNA (m): sc-152146, PDZK11 shRNA Plasmid (h): sc-91243-SH, PDZK11 shRNA Plasmid (m): sc-152146-SH, PDZK11 shRNA (h) Lentiviral Particles: sc-91243-V and PDZK11 shRNA (m) Lentiviral Particles: sc-152146-V.

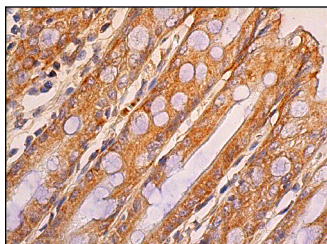
Molecular Weight of PDZK11 isoform 1: 16 kDa.

Molecular Weight of PDZK11 isoform 2: 19 kDa.

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

DATA



PDZK11 (P-20): sc-243769. Immunoperoxidase staining of formalin fixed, paraffin-embedded human rectum tissue showing cytoplasmic staining of glandular cells.

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.