

PBK (C-17)-R: sc-15243-R

BACKGROUND

Protein kinases comprise a large group of encoded factors that regulate cellular processes by catalyzing the transfer of a phosphate group to a hydroxyl acceptor in serine, threonine or tyrosine residues. Kinases are capable of influencing the oncogenic potential of cell systems at the level of oncoprotein or tumor suppressor protein phosphorylation states. Human PDZ-binding kinase, known as PBK, is a 322 amino acid, T/SXV motif-containing serine/threonine kinase that is abundant in placenta and absent from adult brain tissue. A PDZ domain in the tumor suppressor protein Dlg can coordinate with the T/SXV motif of PBK. The cell cycle checkpoint kinase Cdc2/cyclin B is an upstream effector of PBK that can phosphorylate and activate PBK. Active PBK may associate with PDZ-containing proteins and influence cell cycle control or cellular proliferation.

REFERENCES

- Hunter, T. 1995. Protein kinases and phosphatases: the yin and yang of protein phosphorylation and signaling. *Cell* 80: 225-236.
- Hunter, T. 2000. Signaling—2000 and beyond. *Cell* 100: 113-127.
- Gaudet, S., et al. 2000. Characterization of PDZ-binding kinase, a mitotic kinase. *Proc. Natl. Acad. Sci. USA* 97: 5167-5172.
- Abe, Y., et al. 2000. Cloning and expression of a novel MAPKK-like protein kinase, lymphokine-activated killer T-cell-originated protein kinase, specifically expressed in the testis and activated lymphoid cells. *J. Biol. Chem.* 275: 21525-21531.
- Zhao, S., et al. 2001. PDZ-binding kinase participates in spermatogenesis. *Int. J. Biochem. Cell Biol.* 33: 631-636.
- Dougherty, J.D., et al. 2005. PBK/TOPK, a proliferating neural progenitor-specific mitogen-activated protein kinase kinase. *J. Neurosci.* 25: 10773-10785.

CHROMOSOMAL LOCATION

Genetic locus: PBK (human) mapping to 8p21.1; Pbk (mouse) mapping to 14 D1.

SOURCE

PBK (C-17)-R is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the C-terminus of PBK 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-15243 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.

APPLICATIONS

PBK (C-17)-R is recommended for detection of PBK 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

PBK (C-17)-R is also recommended for detection of PBK in additional species, including equine, canine and porcine.

Suitable for use as control antibody for PBK siRNA (h): sc-106892, PBK siRNA (m): sc-152042, PBK shRNA Plasmid (h): sc-106892-SH, PBK shRNA Plasmid (m): sc-152042-SH, PBK shRNA (h) Lentiviral Particles: sc-106892-V and PBK shRNA (m) Lentiviral Particles: sc-152042-V.

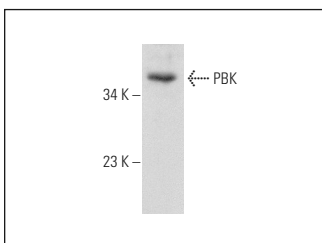
Molecular Weight of PBK: 36 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201, human skeletal muscle extract: sc-363776 or Jurkat whole cell lysate: sc-2204.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



PBK (C-17): sc-15243. Western blot analysis of PBK expression in A-431 whole cell lysate.

RESEARCH USE

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

MONOS
Satisfaction
Guaranteed

Try **PBK (B-10): sc-390399** or **PBK (A-6): sc-390817**, our highly recommended monoclonal alternatives to PBK (C-17).