SANTA CRUZ BIOTECHNOLOGY, INC.

PBK (H-9): sc-390400



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 sytems 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 abuntant in placenta and absent from adult brain tissue. A PDZ domain in the tumor suppressor protein DIg 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

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- 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 progenitorspecific mitogen-activated protein kinase kinase. J. Neurosci. 25: 10773-10785.
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CHROMOSOMAL LOCATION

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

SOURCE

PBK (H-9) is a mouse monoclonal antibody raised against amino acids 184-322 mapping at the C-terminus of PBK of human origin.

PRODUCT

Each vial contains 200 μg lgG_{2b} kappa light chain in 1.0 ml of PBS with <0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, **D0 NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

PBK (H-9) is recommended for detection of PBK of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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 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: human testis extract: sc-363781, Jurkat whole cell lysate: sc-2204 or HeLa whole cell lysate: sc-2200.

RECOMMENDED SUPPORT REAGENTS

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





PBK (H-9): sc-390400. Western blot analysis of PBK expression in Jurkat (A), HeLa (B) and SW480 (C) whole cell lysates. PBK (H-9): sc-390400. Western blot analysis of PBK expression in Jurkat whole cell lysate (A) and mouse testis (B) and human testis (C) tissue extracts. Note the lack of reactivity with mouse PBK in lane B.

RESEARCH USE

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

PROTOCOLS

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