Revision 3

#4941 Store at -20C

Phospho-PBK/TOPK (Thr9) Antibody

Cell Signaling TECHNOLOGY®

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB	H	Endogenous	40	Rabbit	#Q96KB5	55872

Product Usage Information

Application	Dilution
Western Blotting	1:1000

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.

Specificity / Sensitivity

Phospho-PBK/TOPK (Thr9) Antibody detects endogenous levels of PBK/TOPK only when phosphorylated at threonine 9.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to amino acids around Thr9 of human PBK/TOPK. Antibodies are purified by protein A and affinity chromatography.

Background

PBK/TOPK is a serine/threonine kinase that is phosphorylated and active during mitosis (1). PBK/TOPK is composed of kinase subdomains and a carboxy-terminal PDZ-Binding domain, which is thought to interact with the tumor suppressor protein hDlg (1). Increased PBK/TOPK expression has been observed in highly proliferative malignant cell lines, and PBK/TOPK expression is strongly downregulated during terminal differentiation of HL-60 leukemic cells (2,3). PMA-induced kinase activity toward PBK/TOPK has been observed (4), and cdc2/cyclinB has been shown to phosphorylate PBK/TOPK in vitro, presumably at Thr9 (1). Potential substrates of PBK/TOPK include p38 MAPK and c-Myc (3,4).

Background References

1. Gaudet, S. et al. (2000) *Proc. Natl. Acad. Sci. U S A* 97, 5167-5172.
2. Simons-Evelyn, M. et al. (2001) *Blood Cells Mol. Dis.* 27, 825-829.
3. Nandi, A. et al. (2004) *Blood Cells Mol. Dis.* 32, 240-245.
4. Abe, Y. et al. (2000) *J. Biol. Chem.* 276, 21525-21531.
5. Matsumoto, S. et al. (2004) *Biochem Biophys Res Commun.* 325, 997-1004.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

WB: Western Blotting

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster **X:** Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse **GP:** Guinea Pig **Rab:** rabbit **All:** all species expected

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Limited Uses