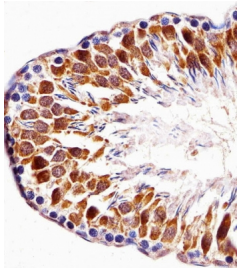
TOPK Antibody / PBK Rabbit Polyclonal Antibody (F54731)

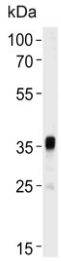
Catalog No.	Formulation	Size
F54731-0.4ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.4 ml
F54731-0.08ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.08 ml

Bulk quote request

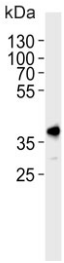
Species Reactivity	Human, Mouse
Format	Purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Antigen affinity purified
UniProt	Q9JJ78
Localization	Nuclear
Applications	Immunohistochemistry (FFPE): 1:25 Western blot: 1:500-1:2000 Flow cytometry: 1:25 (1x10e6 cells)
Limitations	This TOPK Antibody / PBK Rabbit Polyclonal Antibody is available for research use only.



TOPK Antibody IHC Analysis of Rat Testis Tissue. Immunohistochemical analysis of formalin-fixed, paraffin-embedded rat testis tissue using PBK Rabbit Polyclonal Antibody. Brown DAB staining is observed in cells of the seminiferous epithelium, with nuclear and cytoplasmic immunoreactivity. Heat-induced epitope retrieval was performed using citrate buffer (pH 6.0) for 20 minutes.



TOPK Antibody WB Analysis of Mouse Testis Tissue. Western blot analysis of mouse testis tissue lysate using PBK Rabbit Polyclonal Antibody. An immunoreactive band is detected at approximately 36-40 kDa, consistent with the reported migration of PBK/TOPK. Although the calculated molecular weight is approximately 36 kDa, published studies have documented PBK migration in the 36-43 kDa range.



TOPK Antibody WB Analysis of Human HeLa Cells. Western blot analysis of human HeLa cell lysate using PBK Rabbit Polyclonal Antibody. An immunoreactive band is detected at approximately 36-40 kDa, consistent with the commonly reported migration of PBK/TOPK and its calculated molecular weight of approximately 36 kDa.

Description

TOPK Antibody / PBK Rabbit Polyclonal Antibody targets T-LAK cell-originated protein kinase, a serine/threonine protein kinase encoded by the PBK gene. Also known as PDZ binding kinase or TOPK, this enzyme participates in cellular proliferation, mitotic regulation, and intracellular signaling. Its expression is closely associated with actively dividing cells, making it an important component of research into cell cycle progression and cancer-associated kinase activity.

TOPK belongs to a group of protein kinases related to the mitogen-activated protein kinase kinase family. Although it shares structural features with MAPK pathway components, its regulation and biological activities are distinct from those of conventional MAPK kinases. TOPK activity is influenced by phosphorylation, protein interactions, and cell cycle-dependent regulatory mechanisms that coordinate signaling during cellular division.

One of the defining characteristics of TOPK is its association with mitosis. The protein undergoes regulatory phosphorylation during cell cycle progression, and its kinase activity contributes to molecular events involved in mitotic organization. Studies have linked TOPK to histone H3 phosphorylation, chromatin-associated signaling, and the coordination of cellular processes required for successful division. These functions connect kinase regulation with changes in chromosome structure and proliferative activity.

TOPK also interacts with signaling pathways involving p38 MAPK and ERK. Through these regulatory connections, PBK can influence cellular responses associated with proliferation, stress adaptation, and survival. The biological consequences of TOPK signaling depend on the cellular environment, upstream regulatory mechanisms, and the availability of downstream substrates.

Expression of TOPK has been documented in proliferative tissues, including the testis, where its activity has been investigated in relation to germ cell development and spermatogenesis. Its association with dividing cell populations reflects the importance of coordinated kinase signaling during tissue renewal and cellular differentiation.

Elevated TOPK expression has also been reported in several malignancies, including colorectal, breast, lung, and other cancers. Experimental studies have associated increased kinase activity with tumor cell proliferation, migration, and resistance to cellular stress. These observations have generated interest in TOPK as a potential therapeutic target, although its biological significance varies among tumor types and experimental models.

Understanding TOPK regulation provides insight into mitotic signaling, kinase activation, and the molecular mechanisms governing cellular proliferation. TOPK Antibody is relevant to investigations of PBK expression, MAPK-associated signaling, cell cycle regulation, and cancer biology.

TOPK, also known as PBK, is a serine/threonine kinase involved in mitotic progression, cellular proliferation, and MAPK-associated signaling. For an additional antibody targeting this protein, with western blot, immunohistochemistry, immunofluorescence, flow cytometry, and knockout validation data, see our PBK Antibody page.

Application Notes

The stated application concentrations are suggested starting points. Titration of the TOPK Antibody / PBK Rabbit

Polyclonal Antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

A portion of amino acids 58-86 from the mouse protein was used as the immunogen for the TOPK antibody.

Storage

Aliquot the TOPK antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

PBK antibody, PDZ binding kinase antibody, PDZ-binding kinase antibody, T-LAK cell-originated protein kinase antibody, T-LAK cell-originated kinase antibody, TOPK kinase antibody

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