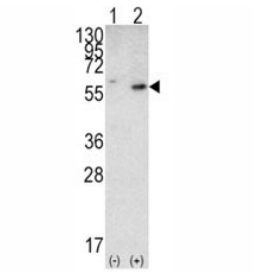
PTEN Antibody (F51131)

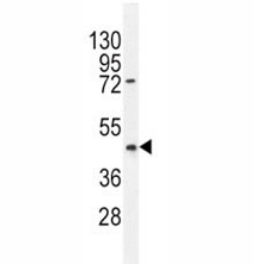
Catalog No.	Formulation	Size
F51131-0.4ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.4 ml
F51131-0.08ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.08 ml

Bulk quote request

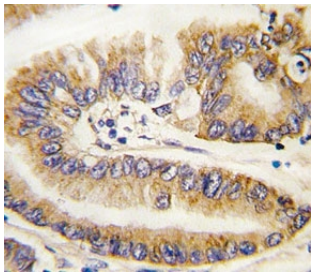
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Purified
UniProt	P60484
Applications	Western blot: 1:1000 IHC (Paraffin): 1:10-1:50 Immunofluorescence: 1:10-1:50
Limitations	This PTEN antibody is available for research use only.



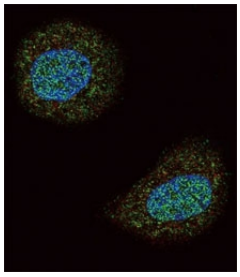
Western blot analysis of PTEN antibody and 293 cell lysate (2 ug/lane) either nontransfected (Lane 1) or transiently transfected with the PTEN gene (2).



PTEN antibody western blot analysis in HL-60 lysate



IHC analysis of FFPE human lung carcinoma tissue stained with PTEN antibody



Confocal immunofluorescent analysis of PTEN antibody with MCF-7 cells followed by Alexa Fluor 488-conjugated goat anti-rabbit lgG (green). Actin filaments have been labeled with Alexa Fluor 555 Phalloidin (red). DAPI was used as a nuclear counterstain (blue).

Description

PTEN, (phosphatase and tensin homolog deleted on chromosome 10), also known as MMAC1 (mutated in multiple advanced cancers 1), is a tumor suppressor implicated in a large number of human tumors. The PTEN phosphatase incorporates the catalytic motif (HCXXGXXRS/T) that is a signature of the protein tyrosine phosphatase family. Recombinant human PTEN is a dual phosphatase with ability to dephosphorylate both tyrosine and serine/threonine residues. PTEN functions primarily as a lipid phosphatase to regulate signal transduction pathways, with a primary target identified as phosphatidylinositol 3,4,5 trisphosphate. In addition, PTEN presents weak tyrosine phosphatase activity, which may downregulate signaling pathways involving focal adhesion kinase or Shc. PTEN negatively regulates activation of the serine/threonine kinase Akt/PKB by blocking its phosphorylation, thereby inhibiting the PI 3 kinase Akt signaling pathway, which is important for cell survival. In vivo, the majority of PTEN missense mutations detected in tumor specimens target the phosphatase domain and cause a loss in PTEN phosphatase activity. Mutations in PTEN are associated with several common cancers including prostate, brain and breast cancer, and with Cowden's disease, an autosomal dominant disorder conferring susceptibility to benign and malignant tumors. Germline mutations of PTEN are also linked Lhermitte-Duclos disease and Bannayan-Zonana syndrome. Mutations of PTEN occur in 60 to 80% of prostate cancers. PTEN is also essential for embryonic development.

For broader research into PTEN expression and tumor suppressor function, explore our PTEN Antibody page for additional reagents targeting phosphatase and tensin homolog.

Application Notes

Titration of the PTEN antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

A portion of amino acids 69-104 from the human protein was used as the immunogen for this PTEN antibody.

Storage

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

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