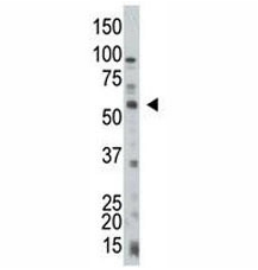
PTEN Antibody (F51132)

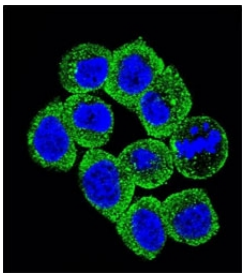
Catalog No.	Formulation	Size
F51132-0.4ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.4 ml
F51132-0.08ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.08 ml

Bulk quote request

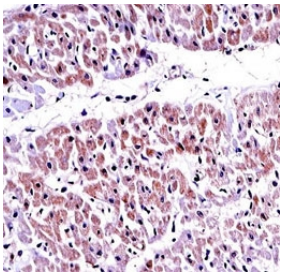
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Purified
UniProt	P60484
Applications	Western blot: 1:1000 Immunofluorescence: 1:10-1:50 IHC (Paraffin): 1:10-1:50
Limitations	This PTEN antibody is available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



PTEN antibody used in western blot to detect PTEN in HL-60 cell lysate



Confocal immunofluorescent analysis of PTEN antibody with HeLa cells followed by Alexa Fluor 488-conjugated goat anti-rabbit IgG (green). DAPI was used as a nuclear counterstain (blue).



PTEN antibody immunohistochemistry analysis in formalin fixed and paraffin embedded human heart tissue.

Description

PTEN (phosphatase and tensin homolog deleted on chromosome 10) acts as a tumor suppressor. Acts as a dual-specificity protein phosphatase, dephosphorylating tyrosine-, serine- and threonine-phosphorylated proteins. Also acts as a lipid phosphatase, removing the phosphate in the D3 position of the inositol ring from phosphatidylinositol 3,4,5-trisphosphate, phosphatidylinositol 3,4-diphosphate, phosphatidylinositol 3-phosphate and inositol 1,3,4,5-tetrakisphosphate with order of substrate preference in vitro PtdIns(3,4,5)P3 > PtdIns(3,4)P2 > PtdIns3P > Ins(1,3,4,5)P4. The lipid phosphatase activity is critical for its tumor suppressor function. Antagonizes the PI3K-AKT/PKB signaling pathway by dephosphorylating phosphoinositides and thereby modulating cell cycle progression and cell survival. The unphosphorylated form cooperates with AIP1 to suppress AKT1 activation. Dephosphorylates tyrosine-phosphorylated focal adhesion kinase and inhibits cell migration and integrin-mediated cell spreading and focal adhesion formation. Plays a role as a key modulator of the AKT-mTOR signaling pathway controlling the tempo of the process of newborn neurons integration during adult neurogenesis, including correct neuron positioning, dendritic development and synapse formation. May be a negative regulator of insulin signaling and glucose metabolism in adipose tissue. The nuclear monoubiquitinated form possesses greater apoptotic potential, whereas the cytoplasmic nonubiquitinated form induces less tumor suppressive ability. In motile cells, suppresses the formation of lateral pseudopods and thereby promotes cell polarization and directed movement. [UniProt]

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 264-295 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.

Copyright © NSJ Bioreagents. All rights reserved.