

## PTEN(Phospho-Ser370) Antibody

Catalog No: #11062



Package Size: #11062-1 50ul #11062-2 100ul #11062-4 25ul

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## Description

Product Name	PTEN(Phospho-Ser370) Antibody
Host Species	Rabbit
Clonality	Polyclonal
Purification	Antibodies were produced by immunizing rabbits with synthetic phosphopeptide and KLH conjugates. Antibodies were purified by affinity-chromatography using epitope-specific phosphopeptide. Non-phospho specific antibodies were removed by chromatography using non-phosphopeptide.
Applications	WB IHC IF
Species Reactivity	Hu Ms Rt
Specificity	The antibody detects endogenous level of PTEN only when phosphorylated at serine 370.
Immunogen Type	Peptide-KLH
Immunogen Description	Peptide sequence around phosphorylation site of serine 370(D-V-S(p)-D-N) derived from Human PTEN.
Target Name	PTEN
Modification	Phospho-Ser370
Other Names	BZS; DEC; GLM2; MHAM; TEP1
Accession No.	Swiss-Prot: P60484NCBI Gene ID: 5728NCBI mRNA: NM_000314.4NCBI Protein: NP_000305.3
Concentration	1.0mg/ml
Formulation	Supplied at 1.0mg/mL in phosphate buffered saline (without Mg <sup>2+</sup> and Ca <sup>2+</sup> ), pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Storage	Store at -20°C

## Application Details

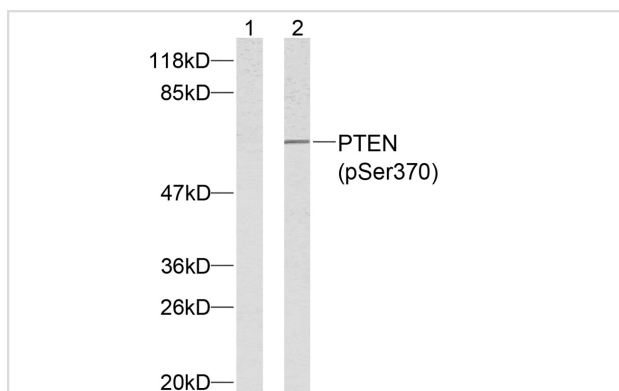
Predicted MW: 54kd

Western blotting: 1:500

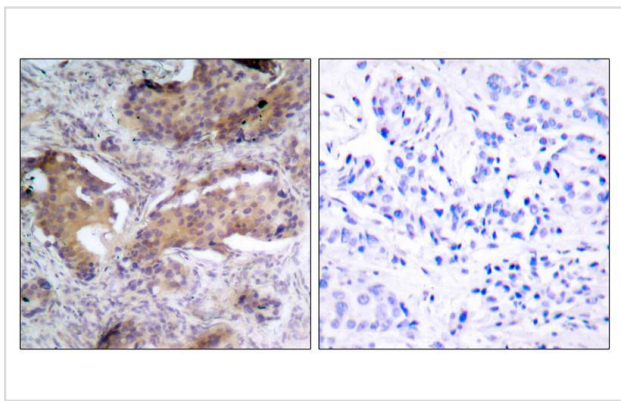
Immunohistochemistry: 1:50~1:100

Immunofluorescence: 1:100~1:200

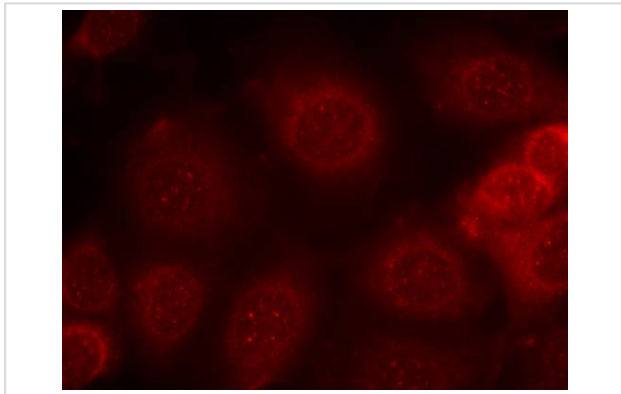
## Images



Western blot analysis of extracts from HeLa cells using PTEN (phospho-Ser370) antibody (#11062).



Immunohistochemical analysis of paraffin- embedded human breast carcinoma tissue using PTEN (phospho-Ser370) antibody (#11062).



Immunofluorescence staining of methanol-fixed MCF7 cells using PTEN (phospho-Ser370) antibody (#11062, Red).

## Background

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  $\text{PtdIns}(3,4,5)\text{P}_3 > \text{PtdIns}(3,4)\text{P}_2 > \text{PtdIns}3\text{P} > \text{Ins}(1,3,4,5)\text{P}_4$ . 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.

Myers M.P., Pass I., Batty I.H., Van der Kaay J., Stolarov J.P., Hemmings B.A., Wigler M.H., Downes C.P., Tonks N.K. *Proc. Natl. Acad. Sci. U.S.A.* 95:13513-13518(1998)

Song M.S., Salmena L., Carracedo A., Egia A., Lo-Coco F., Teruya-Feldstein J., Pandolfi P.P. *Nature* 455:813-817(2008)

Scala S., Bruni P., Lo Muzio L., Mignogna M., Viglietto G., Fusco A. *Int. J. Oncol.* 13:665-668(1998)

## Published Papers

Zhi Li, Gong Xiang Liu, Yu Lan Liu et al., Effect of adenovirus-mediated PTEN gene on ulcerative colitis-associated colorectal cancer, *Int J Colorectal Dis*, 28(8):1107B-C1115(2013)

PMID:23516074

Note: This product is for in vitro research use only and is not intended for use in humans or animals.