

**PTEN Antibody (Center S385)**  
**Affinity Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP18619c**

**Specification**

**PTEN Antibody (Center S385) - Product Information**

Application	WB,E
Primary Accession	<a href="#">P60484</a>
Other Accession	<a href="#">Q9PUT6</a> , <a href="#">Q08586</a> , <a href="#">NP_000305.3</a>
Reactivity	Human
Predicted Host	Mouse, Xenopus
Clonality	Rabbit
Isotype	Polyclonal
Calculated MW	Rabbit Ig 47166
Antigen Region	363-392

**PTEN Antibody (Center S385) - Additional Information**

**Gene ID 5728**

**Other Names**

Phosphatidylinositol 3, 5-trisphosphate 3-phosphatase and dual-specificity protein phosphatase PTEN, Mutated in multiple advanced cancers 1, Phosphatase and tensin homolog, PTEN, MMAC1, TEP1

**Target/Specificity**

This PTEN antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 363-392 amino acids from the Central region of human PTEN.

**Dilution**

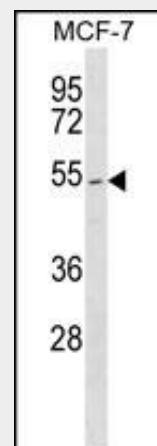
WB~~1:1000

**Format**

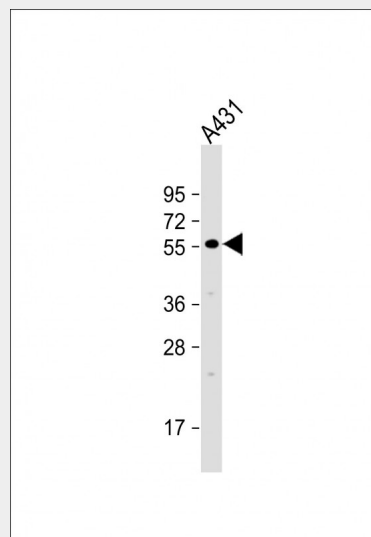
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

**Storage**

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C



PTEN Antibody (S385) (Cat. #AP18619c) western blot analysis in MCF-7 cell line lysates (35ug/lane). This demonstrates the PTEN antibody detected the PTEN protein (arrow).



Anti-PTEN-S385 at 1:1000 dilution + A431 whole cell lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 47 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

**PTEN Antibody (Center S385) -**

in small aliquots to prevent freeze-thaw cycles.

### Precautions

PTEN Antibody (Center S385) is for research use only and not for use in diagnostic or therapeutic procedures.

### PTEN Antibody (Center S385) - Protein Information

**Name** PTEN

**Synonyms** MMAC1, TEP1

### Function

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 (PubMed:<a href="http://www.uniprot.org/citations/26504226" target="\_blank">26504226</a>, PubMed:<a href="http://www.uniprot.org/citations/16824732" target="\_blank">16824732</a>). 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 MAGI2 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

### Background

This gene was identified as a tumor suppressor that is mutated in a large number of cancers at high frequency. The protein encoded this gene is a phosphatidylinositol-3,4,5-trisphosphate 3-phosphatase. It contains a tensin like domain as well as a catalytic domain similar to that of the dual specificity protein tyrosine phosphatases. Unlike most of the protein tyrosine phosphatases, this protein preferentially dephosphorylates phosphoinositide substrates. It negatively regulates intracellular levels of phosphatidylinositol-3,4,5-trisphosphate in cells and functions as a tumor suppressor by negatively regulating AKT/PKB signaling pathway.

### PTEN Antibody (Center S385) - References

Miletic, A.V., et al. J. Exp. Med. 207(11):2407-2420(2010)  
Kini, V., et al. J. Biol. Chem. 285(43):33082-33091(2010)  
Shimada, M., et al. Hum. Genet. 128(4):433-441(2010)  
Molina, J.R., et al. Cancer Res. 70(17):6697-6703(2010)  
Iliopoulos, D., et al. Mol. Cell 39(4):493-506(2010)

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.

**Cellular Location**

Cytoplasm. Nucleus. Nucleus, PML body.  
Note=Monoubiquitinated form is nuclear.  
Nonubiquitinated form is cytoplasmic.  
Colocalized with PML and USP7 in PML nuclear bodies (PubMed:18716620).  
XIAP/BIRC4 promotes its nuclear localization (PubMed:19473982).

**Tissue Location**

Expressed at a relatively high level in all adult tissues, including heart, brain, placenta, lung, liver, muscle, kidney and pancreas.

**PTEN Antibody (Center S385) - Protocols**

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)