

PTEN Antibody

Catalog No: #21056



Package Size: #21056-1 50ul #21056-2 100ul

Orders: order@signalwayantibody.comSupport: tech@signalwayantibody.com

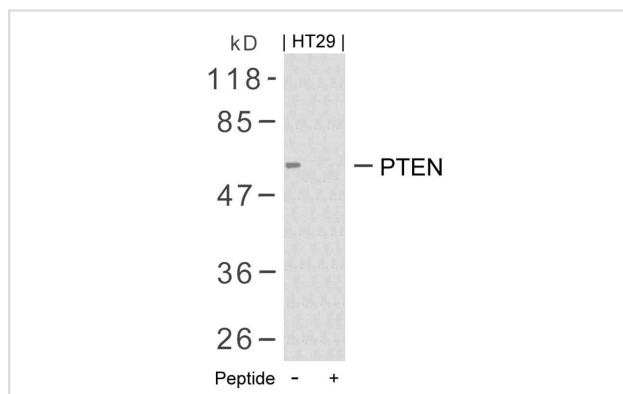
Description

Product Name	PTEN Antibody
Host Species	Rabbit
Clonality	Polyclonal
Purification	Antibodies were produced by immunizing rabbits with synthetic peptide and KLH conjugates. Antibodies were purified by affinity-chromatography using epitope-specific peptide.
Applications	WB;IHC
Species Reactivity	Human;Mouse;Rat
Specificity	The antibody detects endogenous level of total PTEN protein.
Immunogen Type	Peptide-KLH
Immunogen Description	Peptide sequence around aa.378~382/380~384/381~385 (R-Y-S-D-T-T-D-S) derived from Human PTEN.
Conjugates	Unconjugated
Target Name	PTEN
Other Names	MMAC1; Mutated in multiple advanced cancers 1; Protein-tyrosine phosphatase PTEN; TEP1;
Accession No.	Swiss-Prot: P60484NCBI Protein: NP_000305.3
Calculated MW	47kDa
SDS-PAGE MW	54kDa
Concentration	1.0mg/ml
Formulation	Supplied at 1.0mg/mL in phosphate buffered saline (without Mg ²⁺ and Ca ²⁺), pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Storage	Store at -20°C for long term preservation (recommended). Store at 4°C for short term use.

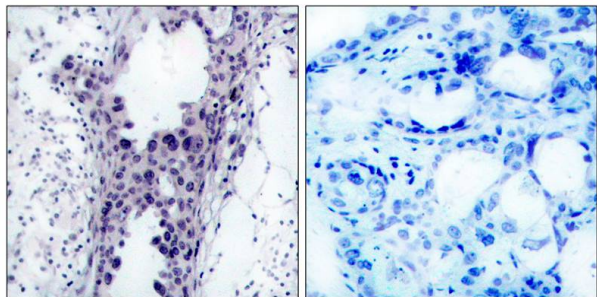
Application Details

WB 1:500-1:2000; IHC 1:50-1:200;

Images



Western blot analysis of extracts from HT29 cells using PTEN(Ab-380/382/383) Antibody #21056 and the same antibody preincubated with blocking peptide.



Immunohistochemical analysis of paraffin-embedded human breast carcinoma tissue using PTEN(Ab-380/382/383) Antibody #21056(left) or the same antibody preincubated with blocking peptide(right).

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. May be a negative regulator of insulin signaling and glucose metabolism in adipose tissue.

Al-Khouri AM, et al. (2005) J Biol Chem. 280(42):35195-35202.

Torres J, et al. (2001) J Biol Chem. 276(2): 993-998.

Vazquez F, et al. (2000) Mol Cell Biol. 20(14): 5010-5018.

Published Papers

el at., PTEN expression in U251 glioma cells enhances their sensitivity to ionizing radiation by suppressing DNA repair capacity. In Eur Rev Med Pharmacol Sci on 2019 Dec by Li HL, Wang CY, et al..PMID:31841199, , (2019)

[PMID:31841199](#)

el at., Acetylshikonin stimulates glucose uptake in L6 myotubes via a PLC-β3/PKCδ-dependent pathway. In Biomed Pharmacother on 2019 Apr by Wendong Huang, Jiacheng Zeng, et al..PMID: 30780104, , (2019)

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el at., Molecular Mechanisms of Bladder Outlet Obstruction in Transgenic Male Mice Overexpressing Aromatase (Cyp19a1).In Am J Pathol on 2011 Mar by Wei Lin, Nafis A Rahman,et al..PMID:21356374, , (2011)

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el at., Effect of adenovirus-mediated PTEN gene on ulcerative colitis-associated colorectal cancer. In Int J Colorectal Dis on 2013 Aug by Zhi Li, Gong Xiang Liu, et al..PMID: 23516074, , (2013)

[PMID:23516074](#)

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