PTEN(Ab-370) Antibody

Catalog No: #21057

Package Size: #21057-1 50ul #21057-2 100ul

Signalway Antibody
Orders: order@signalwayantibody.com
Support: tech@signalwayantibody.com

Description

Product Name	PTEN(Ab-370) 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	Hu Ms Rt
Specificity	The antibody detects endogenous level of total PTEN protein.
Immunogen Type	Peptide-KLH
Immunogen Description	Peptide sequence around aa.368~372 (D-V-S-D-N) 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
Concentration	1.0mg/ml
Formulation	Supplied at 1.0mg/mL in phosphate buffered saline (without Mg2+ and Ca2+), 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.

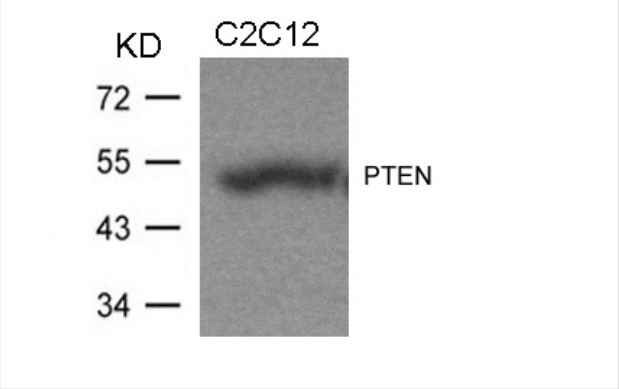
Application Details

Predicted MW: 54kd

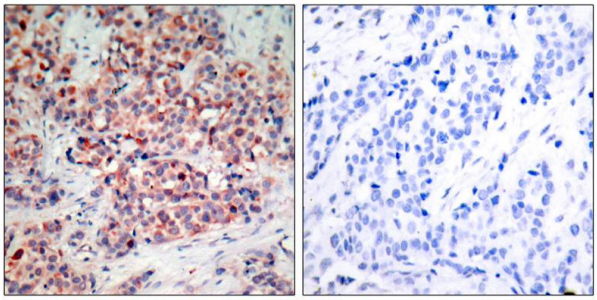
Western blotting: 1:500~1:1000

Immunohistochemistry: 1:50~1:100

Images



Western blot analysis of extracts from C2C12 cells using PTEN(Ab-370) Antibody #21057.



Immunohistochemical analysis of paraffin-embedded human breast carcinoma tissue using PTEN(Ab-370) Antibody #21057(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 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. 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.
Miller SJ, et al. (2002). FEBS Lett. 528 (1-3): 145-153.
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., 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)

PMID:21356374

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.