PTEN(Phospho-Ser380/Thr382/383) Antibody

#11056

Catalog Number: 11056-1, 11056-2

Amount: 50μg/50μl, 100μg/100μl

Swiss-Prot No. :P60484

Form of Antibody: Rabbit IgG in phosphate buffered saline (without Mg2+ and Ca2+), pH 7.4, 150mM NaCl,0.02% sodium azide and 50% glycerol.

Storage/Stability: Store at -20℃/1 year

Immunogen: The antiserum was produced against synthesized phosphopeptide derived from human PTEN around the phosphorylation site of serine 380 and threonine 382/383 (R-Y-S$_P$-D-T$_P$T$_P$-D-S).

Purification: The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific phosphopeptide. The antibody against non-phosphopeptide was removed by chromatography using non-phosphopeptide corresponding to the phosphorylation site.

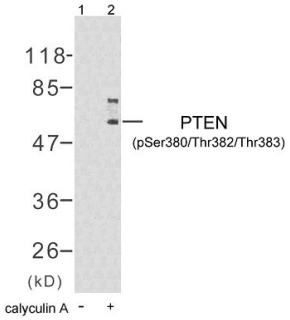
Specificity/Sensitivity: PTEN (phospho-Ser380/Thr382/383) antibody detects endogenous levels of PTEN only when phosphorylated at serine 380 and threonine 382/383.

Reactivity: Human,Mouse,Rat

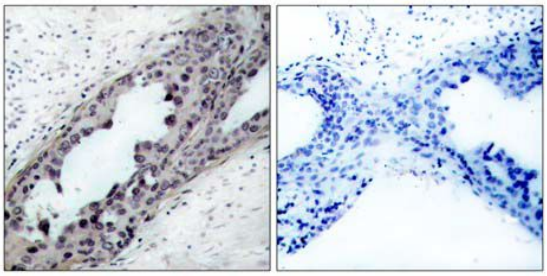
Applications:

Predicted MW: 54 kd

WB: 1:500~1:1000 IHC: 1:50~1:100 IF:1:100~1:200

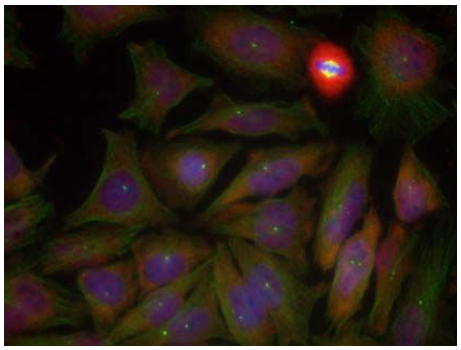


Western blot analysis of extract from HT29 cellsuntreated or treated with calyculin A, using PTEN(phospho-Ser380/Thr382/Thr383) antibody (#11056).



P-Peptide − +

Immunohistochemical analysis of paraffin- embeddedhuman breast carcinoma tissue using PTEN (phospho-Ser380/Thr382/Thr383) antibody (#11056).



Immunofluorescence staining of methanol-fixed HeLa cells using PTEN (phospho-Ser380/Thr382/Thr383) antibody (#11056,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 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.

References：

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.