PTEN(Phospho-Ser370) Antibody

#11062

Catalog Number: 11062-1, 11062-2

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 370 (D-V-Sp-D-N).

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.

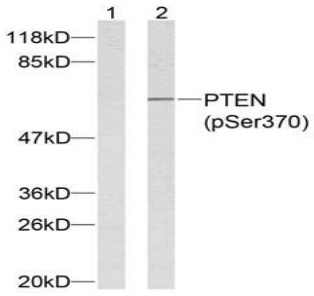
Specificity/Sensitivity: PTEN (phospho-Ser370) antibody detects endogenous levels of PTEN only when phosphorylated at serine 370.

Reactivity: Human,Mouse,Rat

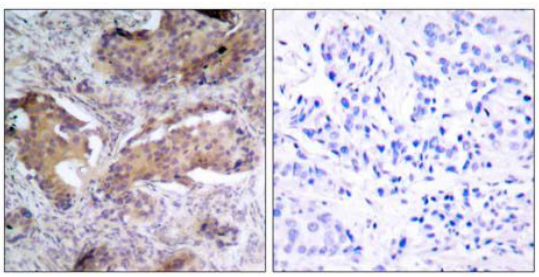
Applications:

Predicted MW: 54 kd

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

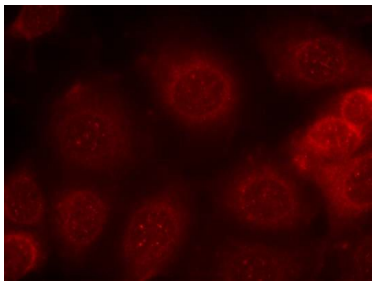


Western blot analysis of extracts from HeLa cells using PTEN (phospho-Ser370) antibody (#11062).



P-Peptide － +

Immunohistochemical analysis of paraffin- embeddedhuman 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 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：

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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.