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35-1411: Polyclonal Antibody to PTEN (Ab-370)

Clonality: Polyclonal Application: WB,IHC

Reactivity: Human, Mouse, Rat

Gene : PTEN
Gene ID : 5728
Uniprot ID : P60484
Format : Purified

Alternative Name: MMAC1, Mutated in multiple advanced cancers 1, Protein-tyrosine phosphatase PTEN, TEP1

Isotype: Rabbit IgG

Immunogen Information: Peptide sequence around aa.368~372 (D-V-S-D-N) derived from Human PTEN.

Description

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.

Product Info

Amount: 50 μl / 100 μl

Content: 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 condition : Store the antibody at 4°C, stable for 6 months. For long-term storage, store at -20°C. Avoid

repeated freeze and thaw cycles.

Application Note

Predicted MW: 54kd, Western blotting: 1:500~1:1000, Immunohistochemistry: 1:50~1:100

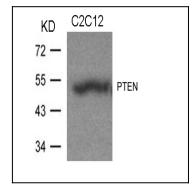


Figure 1: Western blot analysis of extracts from C2C12 cells using PTEN(Ab-370) Antibody 35-1411.



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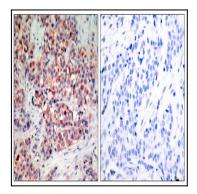


Figure 2: Immunohistochemical analysis of paraffin-embedded human breast carcinoma tissue using PTEN(Ab-370) Antibody 35-1411 (left) or the same antibody preincubated with blocking peptide(right).