

35-1060: Polyclonal Antibody to PTEN(Phospho-Ser370)

Clonality :	Polyclonal
Application :	WB,IHC,IF
Reactivity :	Human,Mouse,Rat
Gene :	PTEN
Gene ID :	5728
Uniprot ID :	P60484
Format :	Purified
Alternative Name :	BZS, DEC, GLM2, MHAM, TEP1
Isotype :	Rabbit IgG
Immunogen Information :	Peptide sequence around phosphorylation site of serine 370(D-V-S(p)-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 $\text{PtdIns}(3,4,5)\text{P}_3 > \text{PtdIns}(3,4)\text{P}_2 > \text{PtdIns}3\text{P} > \text{Ins}(1,3,4,5)\text{P}_4$. 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. 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. Myers M.P., Pass I., Batty I.H., Van der Kaay J., Stolarov J.P., Hemmings B.A., Wigler M.H., Downes C.P., Tonks N.K. Proc. Natl. Acad. Sci. U.S.A. 95:13513-13518(1998) Song M.S., Salmena L., Carracedo A., Egia A., Lo-Coco F., Teruya-Feldstein J., Pandolfi P.P. Nature 455:813-817(2008) Scala S., Bruni P., Lo Muzio L., Mignogna M., Viglietto G., Fusco A. Int. J. Oncol. 13:665-668(1998)

Product Info

Amount :	50 μl / 100 μl
Content :	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 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, Immunofluorescence: 1:100~1:200

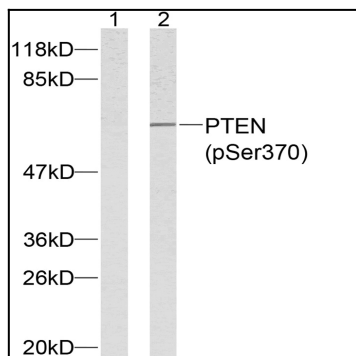


Figure 1: Western blot analysis of extracts from HeLa cells using PTEN (phospho-Ser370) antibody (35-1060).

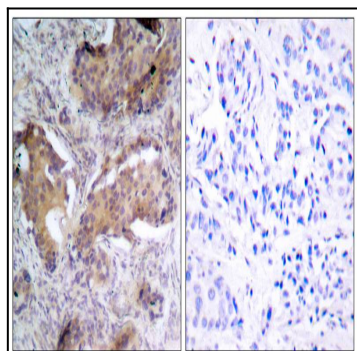


Figure 2: Immunohistochemical analysis of paraffin- embedded human breast carcinoma tissue using PTEN (phospho-Ser370) antibody (35-1060).

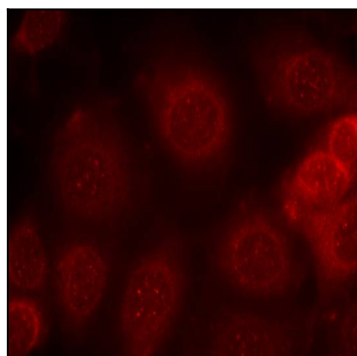


Figure 3: Immunofluorescence staining of methanol-fixed MCF7 cells using PTEN (phospho-Ser370) antibody (35-1060 , Red).