

35-1055: Polyclonal Antibody to PTEN (Phospho-Ser380/Thr382/Thr383)

Clonality :	Polyclonal
Application :	IHC,WB,IF
Reactivity :	Rat,Mouse,Human
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 phosphorylation site of threonine 380/382/383 (R-Y-S(p)-D-T(p)-T(p)-D-S) 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. 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. Torres J, et al. (2001) J Biol Chem. 276(2): 993-998. Vazquez F, et al. (2000) Mol Cell Biol. 20(14): 5010-5018.

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

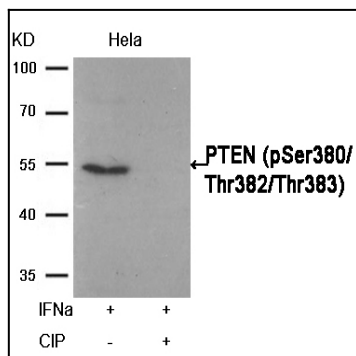


Figure 1: Western blot analysis of extracts from HeLa cells, treated with IFN α or calf intestinal phosphatase (CIP), using PTEN (Phospho-Ser380/Thr382/Thr383) Antibody 35-1055 .

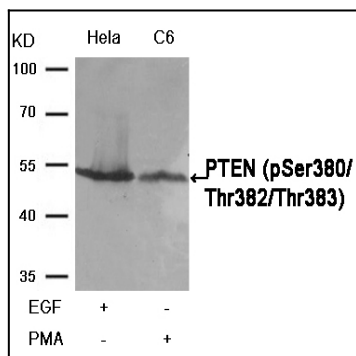


Figure 2: Western blot analysis of extracts from HeLa and C6 cells, treated with EGF or PMA, using PTEN(Phospho-Ser380/Thr382/Thr383) Antibody 35-1055 .

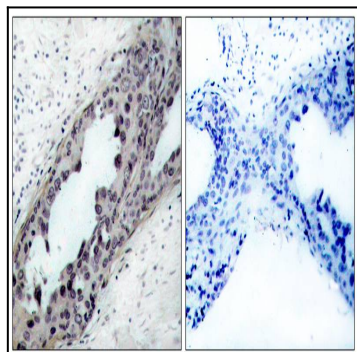


Figure 3: Immunohistochemical analysis of paraffin-embedded human breast carcinoma tissue, using PTEN(Phospho-Ser380/Thr382/Thr383) Antibody 35-1055 (left) or the same antibody preincubated with blocking peptide(right).

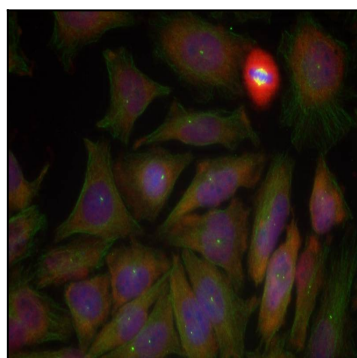


Figure 4: Immunofluorescence staining of methanol-fixed HeLa cells using PTEN(Phospho-Ser380/Thr382/Thr383) Antibody 35-1055 .

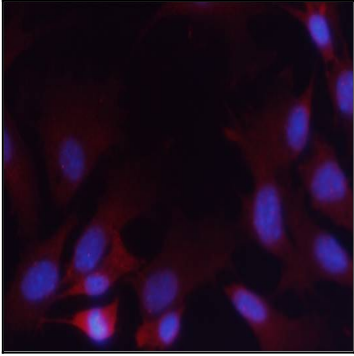


Figure 5 : Immunofluorescence staining of methanol-fixed MEF cells using PTEN (Phospho-Ser380/Thr382/Thr383) Antibody 35-1055 .