

### 35-1008: Polyclonal Antibody to PTEN(Phospho-Ser380)

<b>Clonality :</b>	Polyclonal
<b>Application :</b>	IHC,IF
<b>Reactivity :</b>	Human,Mouse,Rat
<b>Gene :</b>	PETN
<b>Gene ID :</b>	5728
<b>Uniprot ID :</b>	P60484
<b>Format :</b>	Purified
<b>Alternative Name :</b>	BZS,DEC,GLM2,MHAM,TEP1
<b>Isotype :</b>	Rabbit IgG
<b>Immunogen Information :</b>	Peptide sequence around phosphorylation site of serine 380(R-Y-S(p)-D-T) 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.

#### Product Info

<b>Amount :</b>	50 $\mu\text{L}$ / 100 $\mu\text{L}$
<b>Content :</b>	Supplied at 1.0mg/mL in phosphate buffered saline (without $\text{Mg}^{2+}$ and $\text{Ca}^{2+}$ ), pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
<b>Storage condition :</b>	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

Immunohistochemistry 1:50~1:100, Immunofluorescence: 1:100~1:200

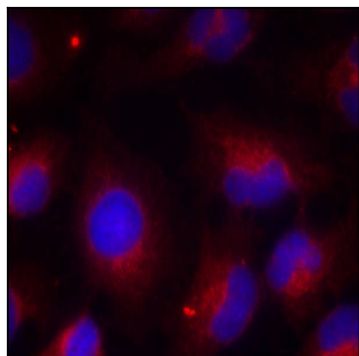


Figure 1: Immunofluorescence staining of methanol-fixed HeLa cells using PTEN (phospho-Ser380) antibody (35-1008 , Red).

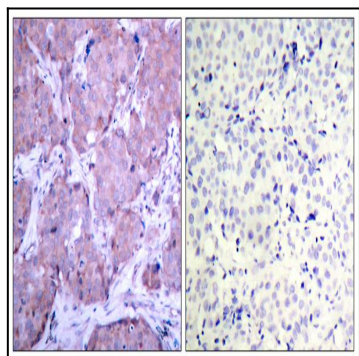


Figure 2: Immunohistochemical analysis of paraffin-embedded human breast carcinoma tissue using PTEN (phospho-Ser380) antibody (35-1008 ).