

PTEN (PT0226R) PT<sup>®</sup> Rabbit mAb

<b>Catalog No :</b>	YM8142
<b>Reactivity :</b>	Human;Mouse;Rat;
<b>Applications :</b>	WB;IF;IP;ELISA
<b>Target :</b>	PTEN
<b>Gene Name :</b>	PTEN MMAC1 TEP1
<b>Protein Name :</b>	Phosphatidylinositol 3,4,5-trisphosphate 3-phosphatase and dual-specificity protein phosphatase PTEN (EC 3.1.3.16) (EC 3.1.3.48) (EC 3.1.3.67) (Mutated in multiple advanced cancers 1) (Phosphatase and
<b>Human Gene Id :</b>	5728
<b>Human Swiss Prot No :</b>	P60484
<b>Mouse Gene Id :</b>	19211
<b>Mouse Swiss Prot No :</b>	O08586
<b>Specificity :</b>	endogenous
<b>Formulation :</b>	PBS, 50% glycerol, 0.05% Proclin 300, 0.05%BSA
<b>Source :</b>	Monoclonal, rabbit, IgG, Kappa
<b>Dilution :</b>	WB 1:1000-1:5000,IF 1:200-1:1000,ELISA 1:5000-1:20000,IP 1:50-1:200,
<b>Purification :</b>	Protein A
<b>Storage Stability :</b>	-15°C to -25°C/1 year(Do not lower than -25°C)
<b>Molecularweight :</b>	47kD
<b>Observed Band :</b>	56kD

**Background :** phosphatase and tensin homolog (PTEN) Homo sapiens This gene was identified as a tumor suppressor that is mutated in a large number of cancers at high frequency. The protein encoded by this gene is a phosphatidylinositol-3,4,5-trisphosphate 3-phosphatase. It contains a tensin like domain as well as a catalytic domain similar to that of the dual specificity protein tyrosine phosphatases. Unlike most of the protein tyrosine phosphatases, this protein preferentially dephosphorylates phosphoinositide substrates. It negatively regulates intracellular levels of phosphatidylinositol-3,4,5-trisphosphate in cells and functions as a tumor suppressor by negatively regulating AKT/PKB signaling pathway. The use of a non-canonical (CUG) upstream initiation site produces a longer isoform that initiates translation with a leucine, and is thought to be preferentially associated with the mitochondrial inner membrane. This longer isoform may help regulate ener

**Function :** 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 MAGI2 to suppress AKT1 activation. Dephosphorylates tyrosine-phosphorylated focal adhesion kinase and inhibits cell migration

**Subcellular Location :** Cytoplasm, Nuclear

**Expression :** Expressed at a relatively high level in all adult tissues, including heart, brain, placenta, lung, liver, muscle, kidney and pancreas.

**Tag :** hot, recombinant

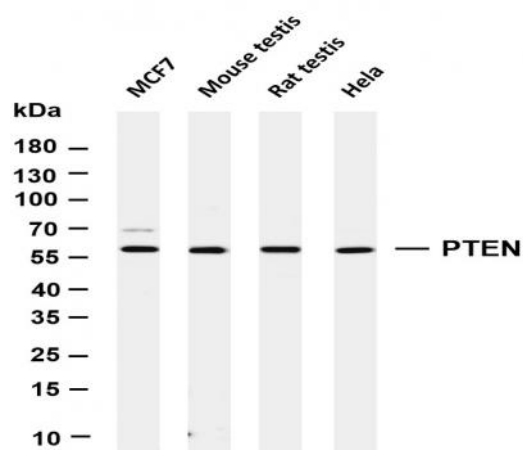
**Sort :** 15

**No4 :** 1

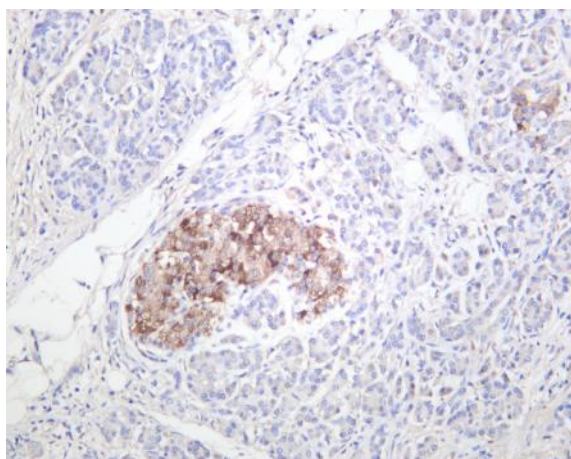
**Host :** Rabbit

**Modifications :** Unmodified

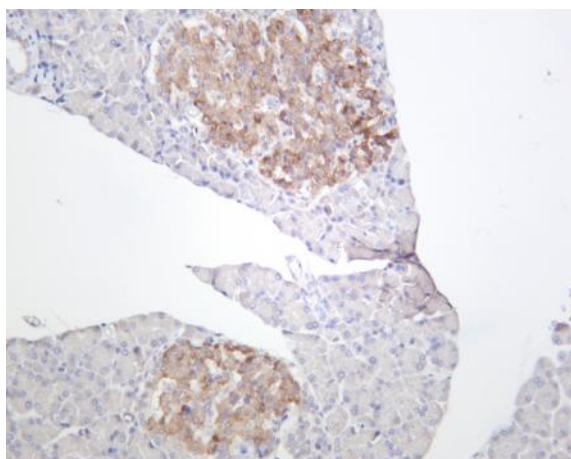
## Products Images



Various whole cell lysates were separated by 4-20% SDS-PAGE, and the membrane was blotted with anti-PTEN (PT0226R) antibody. The HRP-conjugated Goat anti-Rabbit IgG(H + L) antibody was used to detect the antibody. Lane 1: MCF7 Lane 2: Mouse testis Lane 3: Rat testis Lane 4: HeLa Predicted band size: 47kDa Observed band size: 56kDa



Human pancreas was stained with anti-PTEN (PT0226R) rabbit antibody



Rat pancreas was stained with anti-PTEN (PT0226R) rabbit antibody