

## PTEN (PT0226R) PT® Rabbit mAb

CatalogNo: YM8142 **Recombinant** 

### Key Features

#### Host Species

- Rabbit

#### Reactivity

- Human, Mouse, Rat,

#### Applications

- WB, IHC, IF, IP, ELISA

#### MW

- 47kD (Calculated)
- 56kD (Observed)

#### Isotype

- IgG, Kappa

### Recommended Dilution Ratios

IHC 1:200-1:1000

WB 1:1000-1:5000

IF 1:200-1:1000

ELISA 1:5000-1:20000

IP 1:50-1:200,

### Storage

**Storage\*** -15°C to -25°C/1 year (Do not lower than -25°C)

**Formulation** PBS, 50% glycerol, 0.05% Proclin 300, 0.05% BSA

### Basic Information

**Clonality** Monoclonal

**Clone Number** PT0226R

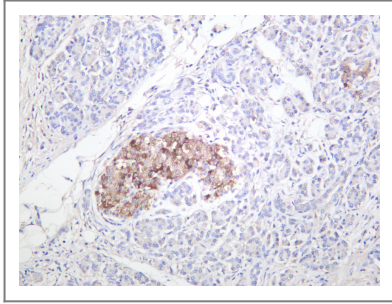
### Immunogen Information

**Specificity** Endogenous

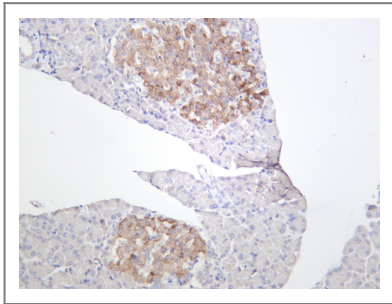
## | Target Information

Gene name	PTEN MMAC1 TEP1		
Protein Name	Phosphatidylinositol 3,4,5-trisphosphate 3-phosphatase and dual-specificity protein phosphatase PTEN (Mutated in multiple advanced cancers 1) (Phosphatase and tensin homolog)		
	Organism	Gene ID	UniProt ID
	Human	<a href="#">5728</a> ;	<a href="#">P60484</a> ;
	Mouse	<a href="#">19211</a> ;	<a href="#">O08586</a> ;
Cellular Localization	Cytoplasm, Nuclear		
Tissue specificity	Expressed at a relatively high level in all adult tissues, including heart, brain, placenta, lung, liver, muscle, kidney and pancreas.		
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 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 MAGI2 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. In motile cells, suppresses the formation of lateral pseudopods and thereby promotes cell polarization and directed movement. ; [Isoform alpha]: Functional kinase, like isoform 1 it antagonizes the PI3K-AKT/PKB signaling pathway. Plays a role in mitochondrial energetic metabolism by promoting COX activity and ATP production, via collaboration with isoform 1 in increasing protein levels of PINK1.		

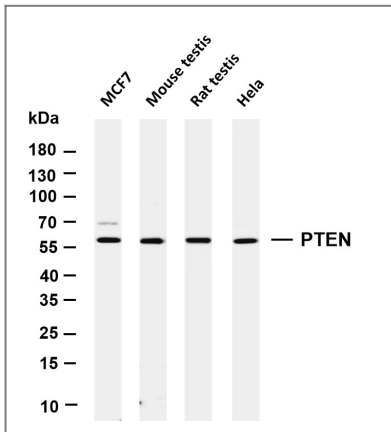
## | Validation Data



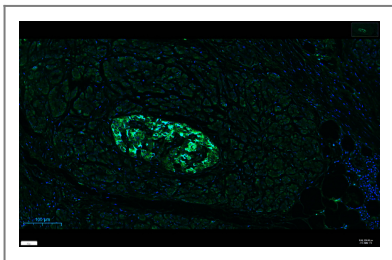
Human pancreas was stained with anti-PTEN rabbit antibody



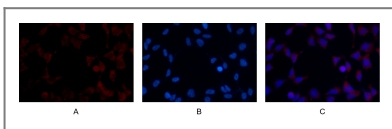
Rat pancreas was stained with anti-PTEN rabbit antibody



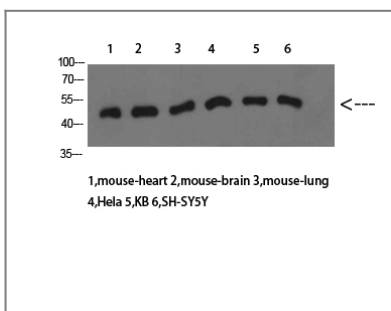
Various whole cell lysates were separated by 4-20% SDS-PAGE, and the membrane was blotted with anti-PTEN antibody. The HRP-conjugated Goat anti-Rabbit IgG(H + L) antibody was used to detect the antibody. Lane 1: MCF7 Lane 2: Mouse testis Lane 3: Rat testis Lane 4: HeLa Predicted band size: 47kDa Observed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



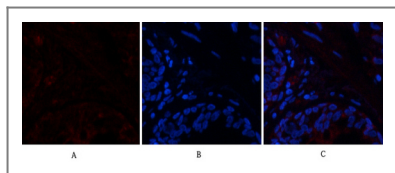
Human pancreas was stained with anti-PTEN rabbit antibody



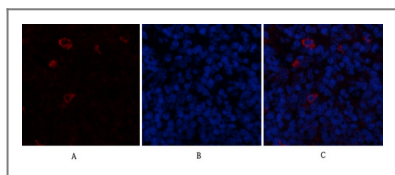
Immunofluorescence analysis of HEK293. Picture A: PTEN antibody (red). Picture B: DAPI (blue). Picture C: Merge of A+B



Western Blot analysis of mouse-heart mouse-brain mouse-lung HeLa KB SH-SY5Y cells using PTEN Antibody diluted at 1:1000. Secondary antibody(catalog#:RS0002) was diluted at 1:20000



Immunofluorescence analysis of human-lung tissue. 1, PTEN Antibody (red) was diluted at 1:200 (4°C, overnight). 2, Cy3 labeled Secondary antibody was diluted at 1:300 (room temperature, 50 min). 3, Picture B: DAPI (blue) 10 min. Picture A: Target. Picture B: DAPI. Picture C: merge of A+B



Immunofluorescence analysis of rat-spleen tissue. 1, PTEN Antibody (red) was diluted at 1:200 (4°C, overnight). 2, Cy3 labeled Secondary antibody was diluted at 1:300 (room temperature, 50 min). 3, Picture B: DAPI (blue) 10 min. Picture A: Target. Picture B: DAPI. Picture C: merge of A+B

## Contact information

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Please scan the QR code to access additional product information:

**PTEN (PT0226R)**  
**PT® Rabbit mAb**

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