

PTEN (PT2124) Mouse mAb

CatalogNo: YM4299

Key Features

Host Species

- Mouse

Reactivity

- Human,

Applications

- IHC, WB, IF, ELISA

MW

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

Isotype

- IgG

Recommended Dilution Ratios

IHC 1:200-1000

WB 1:500-2000

IF 1:100-500

ELISA 1:1000-5000

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 PT2124

Immunogen Information

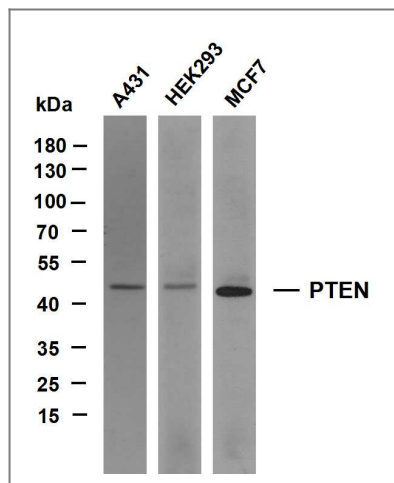
Immunogen Synthesized peptide derived from human PTEN AA range: 300-403

Specificity This antibody detects endogenous levels of PTEN protein.

| 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	5728 ;	P60484 ;
	Mouse	19211 ;	O08586 ;
Cellular Localization	Cytoplasmic, 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



Various whole cell lysates were separated by 10% SDS-PAGE, and the membrane was blotted with anti-PTEN (PT2124) antibody. The HRP-conjugated Goat anti-Mouse IgG(H + L) antibody was used to detect the antibody. Lane 1: A431 Lane 2: HEK293 Lane 3: MCF7

Contact information

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PTEN (PT2124)
Mouse mAb

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