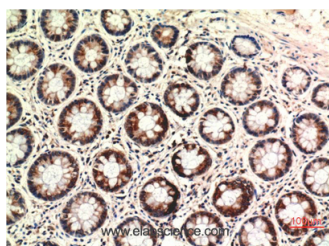


PTEN Monoclonal Antibody

Catalog No.	E-AB-22234	Reactivity	H
Storage	Store at -20°C. Avoid freeze / thaw cycles.	Host	Mouse
Applications	IHC-p	Isotype	IgG

Note: Centrifuge before opening to ensure complete recovery of vial contents.

Images



Immunohistochemistry of paraffin-embedded Human colon carcinoma tissue using PTEN Monoclonal Antibody at dilution of 1:200.

Immunogen Information

Immunogen	Synthetic Peptide of PTEN
Swissprot	P60484
Synonyms	PTEN

Product Information

Buffer	PBS with 0.02% sodium azide, 0.5% protective protein and 50% glycerol, pH7.4
Purify	Protein A purification
Clone No.	Clone:2C10
Dilution	IHC 1:100-200

Background

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.

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Applications: WB-Western Blot IHC-Immunohistochemistry IF-Immunofluorescence IP-Immunoprecipitation FC-Flow cytometry ChIP-Chromatin Immunoprecipitation Reactivity: H-Human R-Rat M-Mouse Mk-Monkey Dg-Dog Ch-Chicken Hm-Hamster Rb-Rabbit Sh-Sheep Pg-Pig Z-Zebrafish X-Xenopus C-Cow.