

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

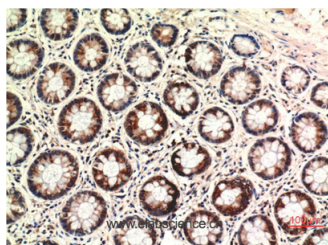
Description

Reactivity	Human
Immunogen	Synthetic Peptide of PTEN
Host	Mouse
Isotype	IgG
Clone	Clone:2C10
Purification	Protein A purification
Formulation	PBS with 0.02% sodium azide,0.5% BSA and 50% glycerol pH 7.4.

Applications Recommended Dilution

IHC 1:100-200

Data



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

Preparation & Storage

Storage Store at -20°C. Avoid freeze / thaw cycles.

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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