PTEN Monoclonal Antibody

Catalog Number:E-AB-22235

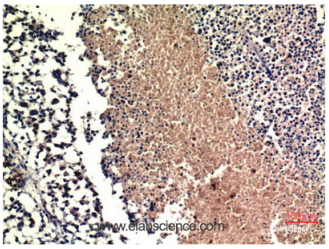
Note: Centrifuge before opening to ensure complete recovery of vial contents.

Description

Reactivity	Human
Immunogen	Synthetic Peptide of PTEN
Host	Mouse
Isotype	IgG
Clone	Clone:9E8
Purification	Protein A purification
Conjugation	Unconjugated
Formulation	PBS with 0.02% sodium azide, 0.5% protective protein and 50% glycerol, pH7.4

Applications	Recommended Dilution
IHC	1:100-200

Data



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

Preparation & Storage

Storage	Store at -20℃. 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 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 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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