PTEN Polyclonal Antibody

Catalog No. E-AB-63495

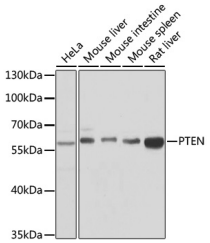
Note: Centrifuge before opening to ensure complete recovery of vial contents.

Description

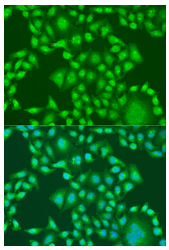
Reactivity	Human,Mouse,Rat
Immunogen	Recombinant fusion protein of human PTEN (NP_000305.3).
Host	Rabbit
Isotype	IgG
Purification	Affinity purification
Conjugation	Unconjugated
Buffer	PBS with 0.02% sodium azide, 50% glycerol, pH7.3.

Applications	Recommended Dilution
WB	1:500-1:2000
IF	1:50-1:200

Data



Western blot analysis of extracts of various cell lines using PTEN Polyclonal Antibody at dilution of 1:1000.
Observed Mw:58kDa
Calculated Mw:19kDa/47kDa/64kDa



Immunofluorescence analysis of U2OS cells using PTEN Polyclonal Antibody at dilution of 1:100.
Blue: DAPI for nuclear staining.

Preparation & Storage

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

Background

This gene was identified as a tumor suppressor that is mutated in a large number of cancers at high frequency. The protein encoded by this gene is a phosphatidylinositol-3,4,5-trisphosphate 3-phosphatase. It contains a tensin like domain as well as a catalytic domain similar to that of the dual specificity protein tyrosine phosphatases. Unlike most of the protein tyrosine phosphatases, this protein preferentially dephosphorylates phosphoinositide substrates. It negatively regulates intracellular levels of phosphatidylinositol-3,4,5-trisphosphate in cells and functions as a tumor suppressor by negatively regulating AKT/PKB signaling pathway. The use of a non-canonical (CUG) upstream initiation site produces a longer isoform that initiates translation with a leucine, and is thought to be preferentially associated with the mitochondrial inner membrane. This longer isoform may help regulate energy metabolism in the mitochondria. A pseudogene of this gene is found on chromosome 9. Alternative splicing and the use of multiple translation start codons results in multiple transcript

variants encoding different isoforms.

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