Product Name: KO-Validated PTEN Recombinant Rabbit Monoclonal Antibody
Catalog #: KVAb00136
For research use only.

Summary

Description	KO&KD-Validated antibody
Host	Rabbit
Application	WB,FCM,ICC
Reactivity	Human,Mouse,Rat
Conjugation	Unconjugated
Modification	Unmodified
Isotype	Rabbit IgG
Clonality	Rabbit mAb
Form	Liquid
Storage	Aliquot and store at -20°C (valid for 12 months). Avoid freeze/thaw cycles.
Shipping	Ice bags
Buffer	Supplied in PBS (pH 7.4) containing 50% glycerol, and 0.02% sodium azide.
Purification	Affinity purification

Application

Dilution Ratio	WB 1:1,000-1:5,000; FC 1:200-1:2,000; ICC 1:100-1:1,000
Molecular Weight	Calculated MW: 47.2kDa

Antigen Information

Gene Name	PTEN
Alternative Names	PTEN; Phosphatase And Tensin Homolog; MMAC1; TEP1; Mutated In Multiple Advanced Cancers 1; PTEN1; Phosphatidylinositol 3,4,5-Trisphosphate 3-Phosphatase And Dual-Specificity Protein Phosphatase PTEN; MHAM; BZS; Phosphatidylinositol-3,4,5-Trisphosphate 3-Phosphatase And Dual-Specificity Protein Phosphatase PTEN; MMAC1 Phosphatase And Tensin Homolog Deleted On Chromosome 10; Mitochondrial Phosphatase And Tensin Protein Alpha; Phosphatase And Tensin-Like Protein; PTEN Variant PTEN-R234Afs*11; Protein Tyrosine Phosphatase; PTEN Variant PTEN-K267Rfs*9; PTEN Variant PTEN-L247*; Mitochondrial PTENalpha; PTENepsilon; EC 3.1.3.16; EC 3.1.3.48; EC 3.1.3.67; 10q23del; PTENbeta; CWS1; GLM2; DEC;
Gene ID	5728.0

SwissProt ID	P60484
Immunogen	A synthesized peptide derived from human PTEN

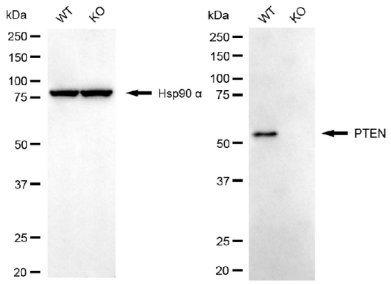
Background

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. [provided by RefSeq, Feb 2015]

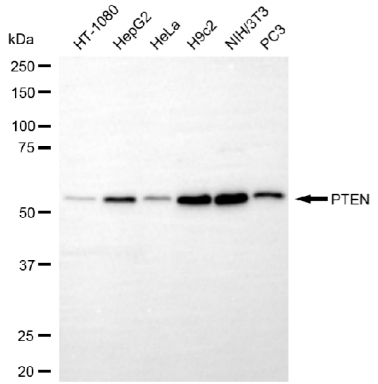
Research Area

Cell Biology,Signal Transduction,Epigenetics and Nuclear Signaling,Cancer,Metabolism,Neuroscience

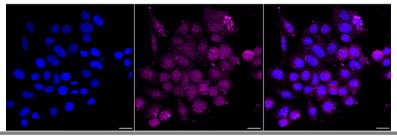
Image Data



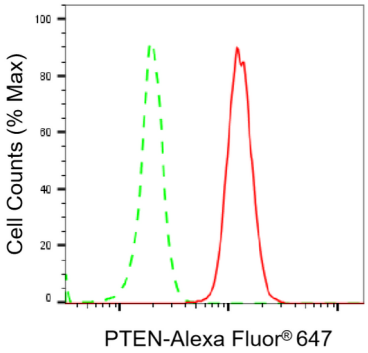
Western blotting analysis using PTEN antibody (KVAb00136). PTEN expression in wild type (WT) and PTEN knockout (KO) HSHC cells with 20 µg of total cell lysates. Hsp90 α serves as a loading control. The blot was incubated with PTEN antibody (KVAb00136, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody (APS0635, 1:10,000) respectively.



Western blotting analysis using PTEN antibody (KVAb00136). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with PTEN antibody (KVAb00136, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody (APS0635, 1:10,000) respectively.



Immunocytochemical staining of HepG2 cells with PTEN antibody (KVAb00136, 1:1,000). Nuclei were stained blue with DAPI; PTEN was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: Medium. Scale bar, 20 µm.



Flow cytometric analysis of PTEN expression in C2C12 cells using PTEN antibody (KVAb00136, 1:2,000). Green, isotype control; red, PTEN.