

Product datasheet for **AP15248PU-N**

PTEN (N-term) Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	IF, IHC, WB
Recommended Dilution:	Western blotting: 1/1000. Immunofluorescence: 1/10-1/50. Immunohistochemistry on Paraffin Sections: 1/50-1/100.
Reactivity:	Human
Host:	Rabbit
Isotype:	Ig
Clonality:	Polyclonal
Immunogen:	KLH conjugated synthetic peptide between 69-104 amino acids from the N-terminal region of Human PTEN.
Specificity:	This antibody recognizes Human PTEN at N-term. Other species not tested.
Formulation:	PBS State: Purified State: Liquid purified Ig fraction Preservative: 0.09% (W/V) Sodium Azide
Concentration:	lot specific
Purification:	Protein G column, eluted with high and low pH buffers and neutralized immediately, followed by dialysis against PBS
Conjugation:	Unconjugated
Storage:	Store undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer. Avoid repeated freezing and thawing.
Stability:	Shelf life: one year from despatch.
Predicted Protein Size:	47166 Da
Gene Name:	phosphatase and tensin homolog



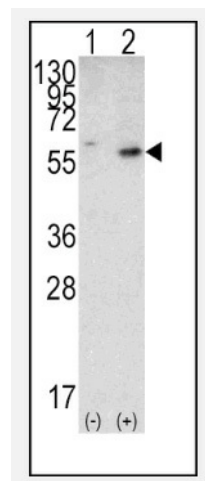
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Database Link: [Entrez Gene 5728 Human P60484](#)

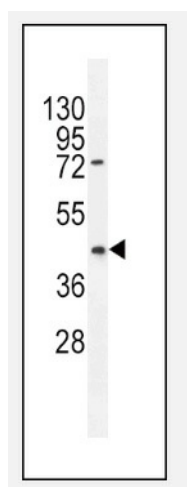
Background: PTEN, (phosphatase and tensin homolog deleted on chromosome 10), also known as MMAC1 (mutated in multiple advanced cancers 1), is a tumor suppressor implicated in a large number of human tumors. The PTEN phosphatase incorporates the catalytic motif (HCXXGXXRS/T) that is a signature of the protein tyrosine phosphatase family. Recombinant human PTEN is a dual phosphatase with ability to dephosphorylate both tyrosine and serine/threonine residues. PTEN functions primarily as a lipid phosphatase to regulate signal transduction pathways, with a primary target identified as phosphatidylinositol 3,4,5 trisphosphate. In addition, PTEN presents weak tyrosine phosphatase activity, which may downregulate signaling pathways involving focal adhesion kinase or Shc. PTEN negatively regulates activation of the serine/threonine kinase Akt/PKB by blocking its phosphorylation, thereby inhibiting the PI 3 kinase Akt signaling pathway, which is important for cell survival. In vivo, the majority of PTEN missense mutations detected in tumor specimens target the phosphatase domain and cause a loss in PTEN phosphatase activity. Mutations in PTEN are associated with several common cancers including prostate, brain and breast cancer, and with Cowden's disease, an autosomal dominant disorder conferring susceptibility to benign and malignant tumors. Germline mutations of PTEN are also linked Lhermitte-Duclos disease and Bannayan-Zonana syndrome. Mutations of PTEN occur in 60 to 80% of prostate cancers. PTEN is also essential for embryonic development.

Synonyms: MMAC1, TEP1

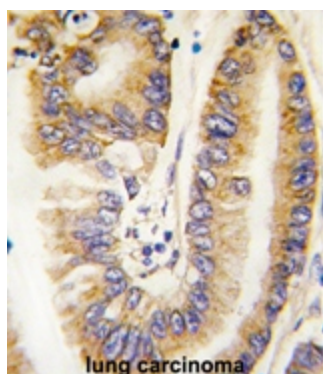
Product images:



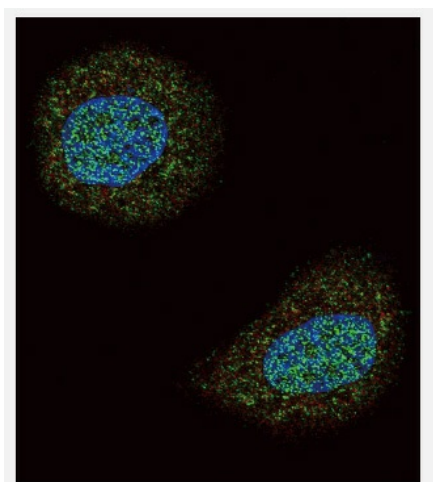
Western blot analysis of PTEN (arrow) using rabbit PTEN Antibody (N-term). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected with the PTEN gene (Lane 2) (Origene Technologies).



Western blot analysis in HL-60 cell line lysates (35ug/lane) using PTEN Antibody (N-term). This demonstrates the PTEN antibody detected the PTEN protein (arrow).



Formalin-fixed and paraffin-embedded human lung carcinoma tissue reacted with PTEN antibody (N-term) which was peroxidase-conjugated to the secondary antibody, followed by DAB staining.



Confocal immunofluorescent analysis of PTEN Antibody (N-term) with MCF-7 cell followed by Alexa Fluor 488-conjugated goat anti-rabbit IgG (green). Actin filaments have been labeled with Alexa Fluor 555 phalloidin (red). DAPI was used to stain the cell nuclear (blue).