Datasheet for ABIN6242545

anti-PTEN antibody (N-Term)

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Overview

Quantity:	400 µL
Target:	PTEN
Binding Specificity:	AA 69-104, N-Term
Reactivity:	Human
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This PTEN antibody is un-conjugated
Application:	Western Blotting (WB), Immunofluorescence (IF), Immunohistochemistry (Paraffin-embedded Sections) (IHC (p))

Product Details

Immunogen:	This PTEN antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 69-104 amino acids from the N-terminal region of human PTEN.
Clone:	RB05082
Isotype:	Ig Fraction
Purification:	This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

Target Details

Target:	PTEN
Alternative Name:	PTEN (PTEN Products)

Target Details

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.
Molecular Weight:	47166
NCBI Accession:	NP_000305
UniProt:	P60484
Pathways:	TCR Signaling, Fc-epsilon Receptor Signaling Pathway, EGFR Signaling Pathway, Inositol Metabolic Process, Synaptic Membrane, Regulation of Cell Size, Autophagy, Platelet-derived growth Factor Receptor Signaling, Signaling of Hepatocyte Growth Factor Receptor, BCR Signaling

Application Details

Application Notes:	IF: 1:10~50. WB: 1:1000. WB: 1:1000. IHC-P: 1:10~50
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	Purified polyclonal antibody supplied in PBS with 0.09 % (W/V) sodium azide.

Handling

Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	4 °C,-20 °C
Expiry Date:	6 months

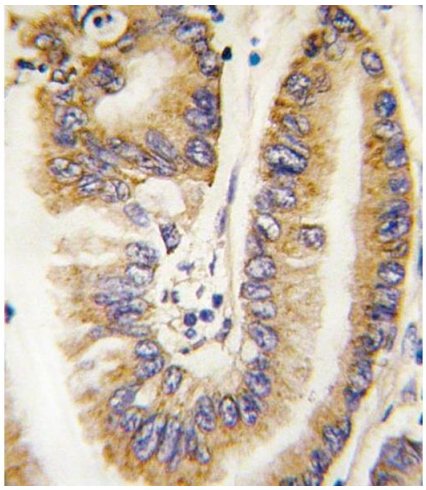
Publications

Product cited in:

Agouni, Mody, Owen, Czopek, Zimmer, Bentires-Alj, Bence, Delibegović: "Liver-specific deletion of protein tyrosine phosphatase (PTP) 1B improves obesity- and pharmacologically induced endoplasmic reticulum stress." in: **The Biochemical journal**, Vol. 438, Issue 2, pp. 369-78, (2011) (PubMed).

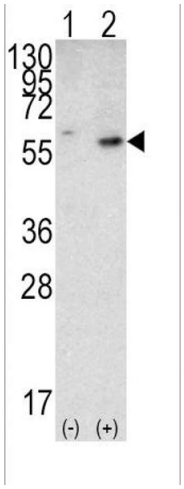
Lehman, Waning, Batuello, Cipriano, Kadakia, Mayo: "Induction of apoptotic genes by a p73-phosphatase and tensin homolog (p73-PTEN) protein complex in response to genotoxic stress. " in: **The Journal of biological chemistry**, Vol. 286, Issue 42, pp. 36631-40, (2011) (PubMed).

Images



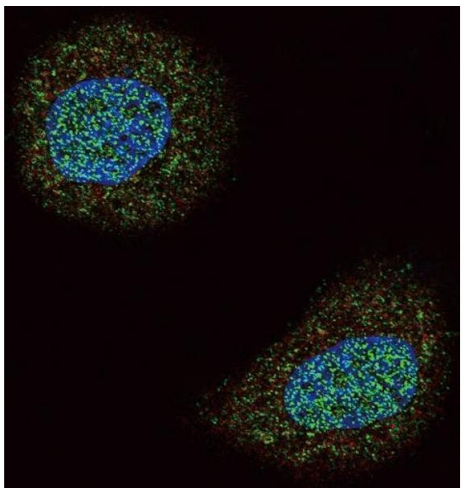
Immunohistochemistry (Paraffin-embedded Sections)

Image 1. Formalin-fixed and paraffin-embedded human lung carcinoma tissue reacted with PTEN antibody (N-term) (ABIN6242545 and ABIN6579042) , which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry, clinical relevance has not been evaluated.



Western Blotting

Image 2. Western blot analysis of PTEN (arrow) using rabbit PTEN Antibody (N-term) (ABIN6242545 and ABIN6579042). 293 cell lysates (2 µg/lane) either nontransfected (Lane 1) or transiently transfected with the PTEN gene (Lane 2) (Origene Technologies).



Immunofluorescence

Image 3. Confocal immunofluorescent analysis of PTEN Antibody (N-term) (ABIN6242545 and ABIN6579042) 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).DI was used to stain the cell nuclear (blue).

Please check the product details page for more images. Overall 4 images are available for ABIN6242545.