

Datasheet for ABIN3032214
anti-PTEN antibody (AA 69-104)



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7 Images

Overview

Quantity:	0.4 mL
Target:	PTEN
Binding Specificity:	AA 69-104
Reactivity:	Human
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This PTEN antibody is un-conjugated
Application:	Western Blotting (WB), ELISA, Immunohistochemistry (IHC), Immunofluorescence (IF)

Product Details

Immunogen:	A portion of amino acids 69-104 from the human protein was used as the immunogen for this PTEN antibody.
Isotype:	Ig Fraction
Purification:	Purified

Target Details

Target:	PTEN
Alternative Name:	PTEN (PTEN Products)
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)

Target Details

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.

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:	Titration of the PTEN antibody may be required due to differences in protocols and secondary/substrate sensitivity.\. Western blot: 1:1000,IHC (Paraffin): 1:10-1:50,Immunofluorescence: 1:10-1:50
Restrictions:	For Research Use only

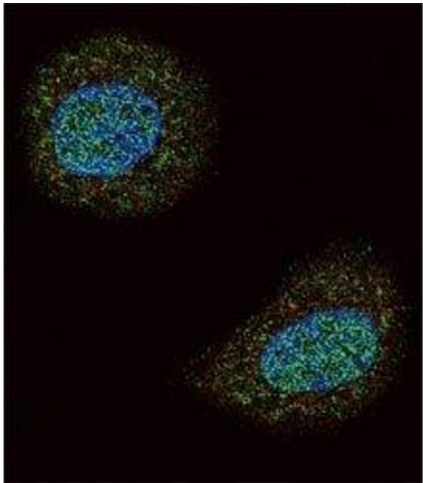
Handling

Format:	Liquid
Buffer:	In 1X PBS pH 7.4 with 0.09 % sodium azide
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.

Handling

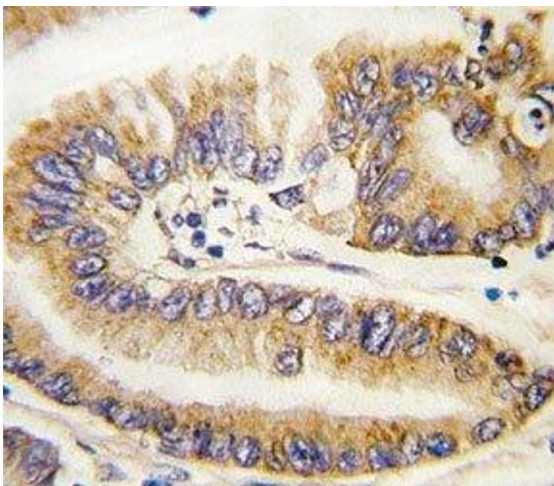
Storage:	-20 °C
Storage Comment:	Aliquot the PTEN antibody and store frozen at -20°C or colder. Avoid repeated freeze-thaw cycles.

Images



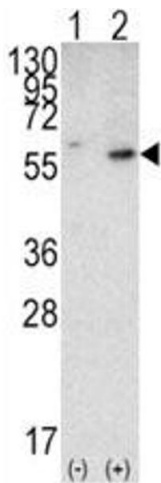
Immunofluorescence

Image 1. Confocal immunofluorescent analysis of PTEN antibody with MCF-7 cells 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 as a nuclear counterstain (bl



Immunohistochemistry

Image 2. IHC analysis of FFPE human lung carcinoma tissue stained with PTEN antibody



Western Blotting

Image 3. Western blot analysis of PTEN antibody and 293 cell lysate (2 ug/lane) either nontransfected (Lane 1) or transiently transfected with the PTEN gene (2).

Please check the [product details page](#) for more images. Overall 7 images are available for ABIN3032214.