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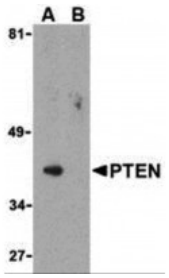
PTEN Antibody

CATALOG NUMBER: 3515



Western blot analysis of PTEN in PC-3 cell lysate with PTEN antibody at 1 ug/mL in either the (A) absence or (B) presence of blocking peptide.

Specifications

SPECIES REACTIVITY:	Human, Mouse
TESTED APPLICATIONS:	ELISA, IP, WB
APPLICATIONS:	PTEN antibody can be used for the detection of PTEN by Western blot at 1 ug/mL.
USER NOTE:	Optimal dilutions for each application to be determined by the researcher.
POSITIVE CONTROL:	1) Cat. No. 1216 - PC-3 Cell Lysate
IMMUNOGEN:	PTEN antibody was raised against a 16 amino acid synthetic peptide from near the carboxy terminus of human PTEN. The immunogen is located within the last 50 amino acids of PTEN.
HOST SPECIES:	Rabbit

Properties

PURIFICATION:	PTEN Antibody is affinity chromatography purified via peptide column.
PHYSICAL STATE:	Liquid
BUFFER:	PTEN Antibody is supplied in PBS containing 0.02% sodium azide.
CONCENTRATION:	1 mg/mL
STORAGE CONDITIONS:	PTEN antibody can be stored at 4˚C for three months and -20˚C, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
CLONALITY:	Polyclonal
ISOTYPE:	IgG
CONJUGATE:	Unconjugated

Additional Info

ALTERNATE NAMES:	PTEN Antibody: BZS, DEC, CWS1, GLM2, MHAM, TEP1, MMAC1, PTEN1, 10q23del, Phosphatidylinositol 3, 4, 5-trisphosphate 3-phosphatase and dual-specificity protein phosphatase PTEN, Mutated in multiple advanced

	cancers 1
ACCESSION NO.:	P60484
PROTEIN GI NO.:	42560209
OFFICIAL SYMBOL:	PTEN
GENE ID:	5728

Background

BACKGROUND:	PTEN Antibody: PTEN (phosphatase and tensin homologue deleted on chromosome ten) is a dual-specificity phosphatase (with both protein and lipid phosphatase activity) first identified as a tumor suppressor gene. PTEN indirectly activates the AKT/PI3K pathway, an important signaling pathway for cell growth and proliferation by keeping levels of the second messenger PIP3 low, thereby preventing phosphoinositide-dependent kinase-1 (PDK-1) from phosphorylating and activating AKT. Expression of wild-type PTEN causes growth arrest in many cancer cell lines, but expression of a PTEN protein containing a mutation that blocks its lipid phosphatase activity failed to suppress growth of glioma cell lines suggesting that the tumor suppressive effect of PTEN is mediated solely by its lipid phosphatase activity. Other activities include the inhibition of insulin stimulated MAPK activation by blocking the insulin-receptor substrate (IRS)-1 phosphorylation and assembly of the IRS-1/Grb2/Sos complex.
REFERENCES:	1) Li J, Yen C, Liaw D, et al. PTEN, a putative protein tyrosine phosphatase gene mutated in human brain, breast, and prostate cancer. Science1997; 275:1943-7.
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	3) Wu X, Senechal K, Neshat MS, et al. The PTEN/MMAC1 tumor suppressor phosphatase functions as a negative regulator of the phosphoinositide 3-kinase/Akt pathway. Proc. Natl. Acad. Sci. USA1998; 95:15587-91.
	4) Myers MP, Pass I, Batty IH, et al. The lipid phosphatase activity of PTEN is critical for its tumor suppressor function. Proc. Natl. Acad. Sci. USA1998; 95:13513-8.

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