

Rabbit PTEN Polyclonal Antibody | anti-PTEN antibody

PTEN Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA329553	Rabbit	Human, Mouse, RatPredicted Reactivity: Pig (100%), Bovine (100%), Horse (100%), Rabbit (100%), Dog (100%), Chicken (100%), Xenopus (100%)	ELISA, Western Blot

PRODUCT SYNONYMS

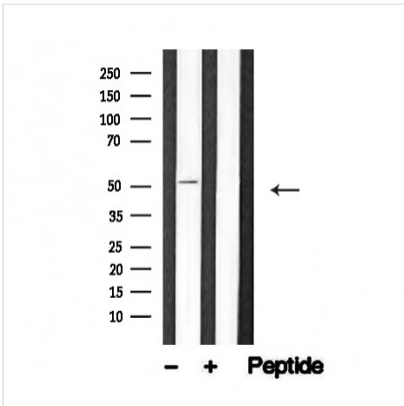
PTEN; Polyclonal Antibody; PTEN Antibody; 10q23del; BZS; DEC; GLM2; MGC11227; MHAM; MMAC1; MMAC1 phosphatase and tensin homolog deleted on chromosome 10; Mutated in multiple advanced cancers 1; Phosphatase and tensin homolog; Phosphatase and tensin like protein; Phosphatidylinositol 3; 4; 5-trisphosphate 3-phosphatase and dual-specificity protein phosphatase PTEN; Pten; PTEN_HUMAN; PTEN1; TEP1; anti-PTEN antibody

PRODUCT SPECIFICATIONS

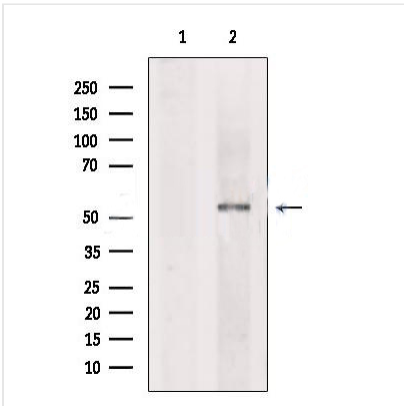
Host	Rabbit
Reactivity	Human, Mouse, Rat Predicted Reactivity: Pig (100%), Bovine (100%), Horse (100%), Rabbit (100%), Dog (100%), Chicken (100%), Xenopus (100%)
Clonality	Polyclonal
Isotype	Rabbit IgG
Specificity	PTEN Antibody detects endogenous levels of total PTEN. Tissue Specificity: Expressed at a relatively high level in all adult tissues, including heart, brain, placenta, lung, liver, muscle, kidney and pancreas.
Purity/Purification	The antiserum was purified by peptide affinity chromatography using SulfoLink Coupling Resin
Form/Format	Liquid. Rabbit IgG in phosphate buffered saline, pH7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Applicable Applications for anti-PTEN antibody	ELISA (Peptide ELISA), WB (Western Blot)
Immunogen	A synthesized peptide derived from human PTEN, corresponding to a region within C-terminal amino acids.
Conjugation	Unconjugated
Fragment	Fab fragment
Post Translational Modifications	Constitutively phosphorylated by CK2 under normal conditions. Phosphorylated in vitro by MAST1, MAST2, MAST3 and STK11. Phosphorylation results in an inhibited activity towards PIP3. Phosphorylation can both inhibit or promote PDZ-binding. Phosphorylation at Tyr-336 by FRK/PTK5 protects this protein from ubiquitin-mediated degradation probably by inhibiting its binding to NEDD4. Phosphorylation by ROCK1 is essential for its stability and activity. Phosphorylation by PLK3 promotes its stability and prevents its degradation by the proteasome.Monoubiquitinated; monoubiquitination is increased in presence of retinoic acid. Deubiquitinated by USP7; leading to its nuclear exclusion. Monoubiquitination of one of either Lys-13 and Lys-289 amino acid is sufficient to modulate PTEN compartmentalization. Ubiquitinated by XIAP/BIRC4.
Subunit Structure	Monomer. The unphosphorylated form interacts with the second PDZ domain of AIP1 and with DLG1 and MAST2 in vitro. Interacts with MAGI2, MAGI3, MAST1 and MAST3, but neither with MAST4 nor with DLG5; interaction with MAGI2 increases protein stability. Interacts with NEDD4. Interacts with NDFIP1 and NDFIP2; in the presence of NEDD4 or ITCH, this interaction promotes PTEN ubiquitination. Interacts (via C2 domain) with FRK. Interacts with USP7; the interaction is direct. Interacts with ROCK1 (By similarity). Interacts with XIAP/BIRC4. Interacts with STK11; the interaction phosphorylates PTEN. Interacts with PPP1R16B. Interacts with NOP53; regulates PTEN phosphorylation and increases its stability.

Similarity	The C2 domain binds phospholipid membranes in vitro in a Ca (2+)-independent manner; this binding is important for its tumor suppressor function.Belongs to the PTEN phosphatase protein family.
Subcellular Location	Cytoplasm. Nucleus. Nucleus>PML body. Note: Monoubiquitinated form is nuclear. Nonubiquitinated form is cytoplasmic. Colocalized with PML and USP7 in PML nuclear bodies (PubMed:18716620). XIAP/BIRC4 promotes its nuclear localization (PubMed:19473982). Secreted. Note: May be secreted via a classical signal peptide and reenter into cells with the help of a poly-Arg motif.
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES



WB (Western Blot)
Western blot analysis of PTEN in lysates of HEK293 , using PTEN Antibody(AF4750).



WB (Western Blot)
Western blot analysis of extracts from Mouse brain, using PTEN Antibody. The lane on the left was treated with blocking peptide.

ADDITIONAL INFORMATION

Related Product Information for anti-PTEN antibody	Tumor suppressor. Acts as a dual-specificity protein phosphatase, dephosphorylating tyrosine-, serine- and threonine-phosphorylated proteins. Also acts as a lipid phosphatase, removing the phosphate in the D3 position of the inositol ring from phosphatidylinositol 3,4,5-trisphosphate, phosphatidylinositol 3,4-diphosphate, phosphatidylinositol 3-phosphate and inositol 1,3,4,5-tetrakisphosphate with order of substrate preference in vitro PtdIns (3,4,5)P3 > PtdIns (3,4)P2 > PtdIns3P > Ins (1,3,4,5)P4. The lipid phosphatase activity is critical for its tumor suppressor function. Antagonizes the PI3K-AKT/PKB signaling pathway by dephosphorylating phosphoinositides and thereby modulating cell cycle progression and cell survival. The unphosphorylated form cooperates with AIP1 to suppress AKT1 activation. Dephosphorylates tyrosine-phosphorylated focal adhesion kinase and inhibits cell migration and integrin-mediated cell spreading and focal adhesion formation. Plays a role as a key modulator of the AKT-mTOR signaling pathway controlling the tempo of the process of newborn neurons integration during adult neurogenesis, including correct neuron positioning, dendritic development and synapse formation. May be a negative regulator of insulin signaling and glucose metabolism in adipose tissue. The nuclear monoubiquitinated form possesses greater apoptotic potential, whereas the cytoplasmic nonubiquitinated form induces less tumor suppressive ability. In motile cells, suppresses the formation of lateral pseudopods and thereby promotes cell polarization and directed movement.Functional kinase, like isoform 1 it antagonizes the PI3K-AKT/PKB signaling pathway. Plays a role in mitochondrial energetic metabolism by promoting COX activity and ATP production, via collaboration with isoform 1 in increasing protein levels of PINK1.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	73765544
NCBI GeneID	5728
NCBI Accession #	NP_000305.3
NCBI GenBank Nucleotide #	NM_000314.4
UniProt Accession #	P60484; O00633; O02679; Q6ICT7; B2R904

Molecular Weight	47,166 Da
NCBI Official Full Name	phosphatidylinositol 3,4,5-trisphosphate 3-phosphatase and dual-specificity protein phosphatase PTEN
NCBI Official Synonym Full Names	phosphatase and tensin homolog
NCBI Official Symbol	PTEN
NCBI Official Synonym Symbols	BZS; DEC; CWS1; GLM2; MHAM; TEP1; MMAC1; PTEN1; 10q23del
NCBI Protein Information	phosphatidylinositol 3,4,5-trisphosphate 3-phosphatase and dual-specificity protein phosphatase PTEN; phosphatase and tensin-like protein; mutated in multiple advanced cancers 1; MMAC1 phosphatase and tensin homolog deleted on chromosome 10; phosphatidyli
UniProt Protein Name	Phosphatidylinositol 3,4,5-trisphosphate 3-phosphatase and dual-specificity protein phosphatase PTEN
UniProt Gene Name	PTEN
UniProt Synonym Gene Names	MMAC1; TEP1
UniProt Entry Name	PTEN_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/pten-antibody-peptide-elisa-western-blot-elisa/329553>