



# PTEN (Acetyl Lys402) Polyclonal Antibody

|                           |                                                                                                                                                                                                                                                                                                                                                                                                   |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Catalog No</b>         | BYab-00055                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Isotype</b>            | IgG                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Reactivity</b>         | Human;Mouse;Rat                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Applications</b>       | WB;ELISA;IHC                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Gene Name</b>          | PTEN                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Protein Name</b>       | Phosphatidylinositol 3,4,5-trisphosphate 3-phosphatase and dual-specificity protein phosphatase PTEN                                                                                                                                                                                                                                                                                              |
| <b>Immunogen</b>          | Synthesized acetyl-peptide derived from the human PTEN around the acetylation site of K402.                                                                                                                                                                                                                                                                                                       |
| <b>Specificity</b>        | Acetyl-PTEN (K402) Polyclonal AntibodySynthesized peptide derived from the human PTEN around the acetylation site of K402.                                                                                                                                                                                                                                                                        |
| <b>Formulation</b>        | Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.                                                                                                                                                                                                                                                                                                                           |
| <b>Source</b>             | Polyclonal, Rabbit,IgG                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Purification</b>       | The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.                                                                                                                                                                                                                                                                             |
| <b>Dilution</b>           | WB 1:500-2000;IHC-p 1:50-300; ELISA 2000-20000                                                                                                                                                                                                                                                                                                                                                    |
| <b>Concentration</b>      | 1 mg/ml                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Purity</b>             | ≥90%                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Storage Stability</b>  | -20°C/1 year                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Synonyms</b>           | PTEN; MMAC1; TEP1; Phosphatidylinositol 3,4,5-trisphosphate 3-phosphatase and dual-specificity protein phosphatase PTEN; Mutated in multiple advanced cancers 1; Phosphatase and tensin homolog                                                                                                                                                                                                   |
| <b>Observed Band</b>      | 47kD                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Cell Pathway</b>       | Cytoplasm . Nucleus . Nucleus, PML body . 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). .; [Isoform alpha]: Secreted . May be secreted via a classical signal peptide and reenter into cells with the help of a poly-Arg motif. |
| <b>Tissue Specificity</b> | Expressed at a relatively high level in all adult tissues, including heart, brain, placenta, lung, liver, muscle, kidney and pancreas.                                                                                                                                                                                                                                                            |
| <b>Function</b>           | catalytic activity:A phosphoprotein + H(2)O = a protein + phosphate.,catalytic activity:Phosphatidylinositol 3,4,5-trisphosphate + H(2)O = phosphatidylinositol 4,5-bisphosphate + phosphate.,catalytic activity:Protein tyrosine phosphate + H(2)O = protein tyrosine + phosphate.,cofactor:Magnesium.,disease:A                                                                                 |

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microdeletion of chromosome 10q23 involving PTEN and BMPR1A is a cause of chromosome 10q23 deletion syndrome [MIM:612242]. This syndrome shows overlapping features of the following three disorders: Bannayan-Zonana syndrome, Cowden disease and juvenile polyposis syndrome. Defects in PTEN are a cause of Bannayan-Zonana syndrome (BZS) [MIM:153480]; also known as Ruvalcaba-Riley-Smith or Bannayan-Riley-Ruvalcaba syndrome (BRRS). In BZS there seems not to be an increased risk of malignancy. It has a partial clinical overlap with CD. BZS is characterized by the classic triad of macroce

**Background**

This gene was identified as a tumor suppressor that is mutated in a large number of cancers at high frequency. The protein encoded by this gene is a phosphatidylinositol-3,4,5-trisphosphate 3-phosphatase. It contains a tensin like domain as well as a catalytic domain similar to that of the dual specificity protein tyrosine phosphatases. Unlike most of the protein tyrosine phosphatases, this protein preferentially dephosphorylates phosphoinositide substrates. It negatively regulates intracellular levels of phosphatidylinositol-3,4,5-trisphosphate in cells and functions as a tumor suppressor by negatively regulating AKT/PKB signaling pathway. The use of a non-canonical (CUG) upstream initiation site produces a longer isoform that initiates translation with a leucine, and is thought to be preferentially associated with the mitochondrial inner membrane. This longer isoform may help regulate ener

**matters needing attention**

Avoid repeated freezing and thawing!

**Usage suggestions**

This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.

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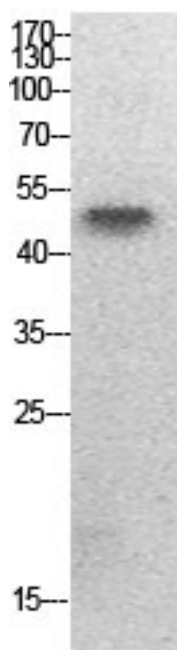
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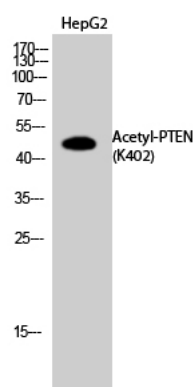
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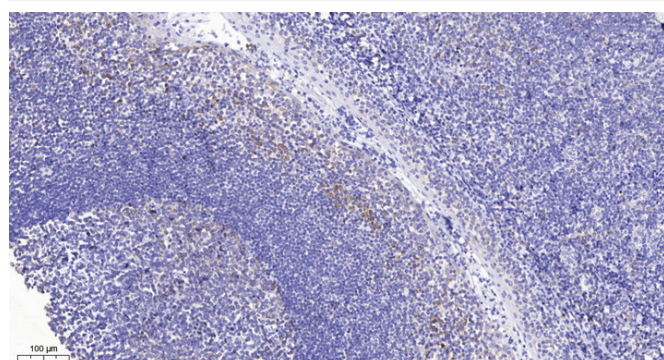
## Products Images



Western Blot analysis of HepG2 cells using Acetyl-PTEN (K402) Polyclonal Antibody. Secondary antibody(catalog#:RS0002) was diluted at 1:20000



Western Blot analysis of HepG2 cells using Acetyl-PTEN (K402) Polyclonal Antibody. Secondary antibody(catalog#:RS0002) was diluted at 1:20000



Immunohistochemical analysis of paraffin-embedded human tonsil. 1, Antibody was diluted at 1:200(4° overnight). 2, Tris-EDTA,pH9.0 was used for antigen retrieval. 3,Secondary antibody was diluted at 1:200(room temperature, 45min).

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