

## Anti-PTEN Antibody Picoband® Biotin Conjugated

Catalog Number: A00006-5-Biotin

### About PTEN

Phosphatase and tensin homolog (PTEN) is a phosphatase in humans and is encoded by the PTEN gene. 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 energy metabolism in the mitochondria. A pseudogene of this gene is found on chromosome 9. Alternative splicing and the use of multiple translation start codons results in multiple transcript variants encoding different isoforms.

### Overview

Product Name	Anti-PTEN Antibody Picoband® Biotin Conjugated
Reactive Species	Human, Mouse, Rat
Clonality	Polyclonal
Formulation	Each vial contains 50% glycerol, 0.9% NaCl, 0.2% Na <sub>2</sub> HPO <sub>4</sub> , 0.02% NaN <sub>3</sub> .
Storage Instructions	At -20°C for one year from date of receipt. Avoid repeated freezing and thawing.
Host	Rabbit
Uniprot ID	P60484

### Technical Details

Immunogen	A synthetic peptide corresponding to a sequence in the middle region of human PTEN identical to the related mouse and rat sequences.
Form	Liquid
Concentration	0.5 mg/mL
Purification	Immunogen affinity purified.
Conjugate	Biotin
Suggested Dilutions	The intended application should be selected according to the customer's experimental requirements.

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