

# PTEN phosphatase

**A**nalysis of the PTEN gene sequence indicated that it was likely to represent a dual-specificity protein tyrosine phosphatase, however initial investigations found it difficult to demonstrate phosphotyrosine phosphatase activity. Subsequent studies have provided clear evidence that PTEN is really a phospholipid phosphatase with a preference for the 3'-position of phosphatidylinositol (3,4,5) trisphosphate and phosphatidylinositol (3,4) bisphosphate. Both PIP<sub>2</sub> and PIP<sub>3</sub> are produced by PI 3-kinase, and an increase in plasma membrane associated PIP<sub>2</sub> and PIP<sub>3</sub> is required for activation of the protein kinase Akt.

Recent studies have indicated that activation of Akt suppresses apoptosis in response to growth factor withdrawal, as well as anokiosis. Consistent with a role for PTEN in regulating activation of Akt, fibroblasts derived from PTEN-deficient mouse embryos are resistant to apoptosis. Recent studies suggesting that PTEN expression is lost in numerous tumor cells indicate that loss of PTEN expression or mutation of the lipid phosphatase activity may play a major role in tumorigenesis.

as described in: Mutter et al., "Altered PTEN expression as a diagnostic marker for the earliest endometrial precancers." JNCI June 2000; 92(11):924-30. AND Weng et al., "PTEN suppresses breast cancer cell growth by phosphatase activity-dependent G1 arrest followed by cell

death." Cancer Res. Nov 1999; 59(22):5808-14. AND Perren et al., "Immunohistochemical Evidence of Loss of PTEN Expression in Primary Ductal Adenocarcinomas of the Breast." Am.J. Pathol. October 1999;155(4):1253-60.

## Anti-Human PTEN (clone 6H2.1)

### Research Applications

Immunoblotting:	1-5 µg/ml
Immunoprecipitation:	5 µg/sample
Immunohistochemistry:	yes
Immunofluorescence:	yes
ELISA:	yes

### Product Description

Host / Ig Type:	mouse monoclonal IgG
Purification:	protein A-chromatography
Immunogen:	fusion protein; human CT sequence




Specificity:	<b>single band specific;</b> detects PTEN at ~60 kDa in total cell lysates
Reactivity:	human, mouse, others likely
Storage:	-20° C
Stability:	1 year

### Production Control Information

<b>Catalog Number:</b>	ABM-2052
<b>Volume:</b>	100 µl
<b>Mass:</b>	100 µg

### Label Sample:



**Anti-Human PTEN**

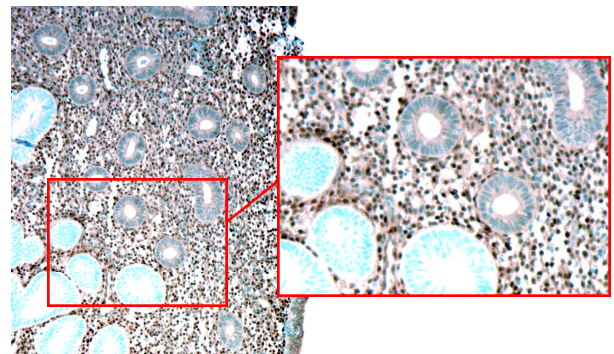
Mouse Monoclonal IgG Clone 6H2.1	Catalog #ABM-2051 100 µg 100 µl Storage: -20° C
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For Research Use only.

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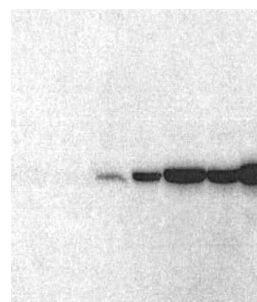
## LOT SPECIFICATION

### Quality Control Analyses



#### Immunohistochemical Analysis

Photomicrographs illustrate PTEN non expressing neoplastic endometrial glands in a background of normal expressing glands and stroma.



#### Immunoblot Analysis

6H2.1 single band specificity on 7 breast cancer cell lines; one of which is PTEN-null; one of which has a monoallelic PTEN deletion and a missense mutation

### Pricing

100 µg / \$379



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