

# 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) biphosphate. Both  $PIP_2$  and  $PIP_3$  are produced by PI 3-kinase, and an increase in plasma membrane associated  $PIP_2$  and  $PIP_3$  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 loss 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.

**NEW**

## Anti-Human PTEN (clone 11G8.1)

### Research Applications

Immunoblotting: 1-5 µg/ml  
Immunoprecipitation: 5 µg/sample

### Product Description

**Host / Ig Type:** mouse monoclonal IgG  
**Purification:** protein A-chromatography  
**Immunogen:** full-length fusion protein; human sequence; ▼ epitope

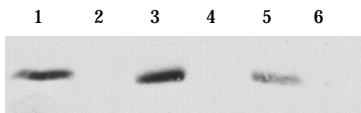


**Specificity:** **single band specific;** detects PTEN at ~60 kDa in total cell lysates  
**Reactivity:** human, mouse, others likely  
**Storage:** -20°C  
**Stability:** 1 year

### Catalog Information

**Catalog Number:** ABM-2055  
**Mass:** 100 µg  
**Price:** \$279

### Quality Control and Comparative Analyses



▲ 11G8.1 single band specificity on 6 cell lines;

lane 1: MEF-PTEN+/+  
lane 2: MEF-PTEN-/-  
lane 3: ACHN = PTEN positive  
lane 4: LnCaP = PTEN negative  
lane 5: HeLa = PTEN positive  
lane 6: 786-0 = PTEN negative

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

### Research Applications

Immunoblotting: 1-5 µg/ml  
Immunoprecipitation: 5 µg/sample  
IHC / IF: yes  
ELISA: yes

### Product Description

**Host / Ig Type:** mouse monoclonal IgG  
**Purification:** protein A-chromatography  
**Immunogen:** full-length fusion protein; human sequence; epitope ▼

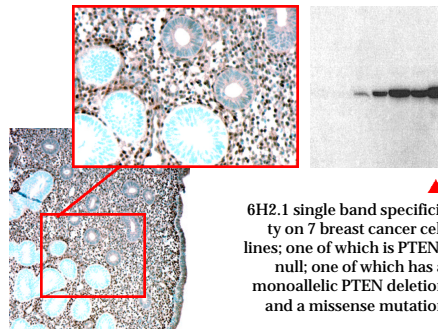


**Specificity:** **single band specific;** detects PTEN at ~60 kDa in total cell lysates  
**Reactivity:** human, mouse, others likely  
**Storage:** -20°C  
**Stability:** 1 year

### Catalog Information

**Catalog Number:** ABM-2052  
**Mass:** 100 µg  
**Price:** \$379

### Quality Control and Comparative Analyses



▲ PTEN non-expressing neoplastic endometrial glands in a background of normal expressing glands and stroma

## Anti-Human PTEN (rabbit IgG)

### Research Applications

Immunoblotting: 1:1000 dilution  
Immunoprecipitation: 1-2 µl per sample  
Lipid Phosphatase Assay: protocol available  
IP-Phosphatase Assay: protocol available

### Product Description

**Host / Ig Type:** rabbit IgG  
**Purification:** antiserum  
**Immunogen:** fusion protein; human CT sequence; aa 239-403



**Specificity:** **single band specific;** detects PTEN at ~60 kDa in total cell lysates  
**Reactivity:** human, mouse, rat  
**Storage:** -20°C  
**Stability:** 2 years

### Catalog Information

**Catalog Number:** ABP-2001  
**Volume:** 100 µl  
**Price:** \$249

### Quality Control and Comparative Analyses

