

pten phosphatase

Analysis 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

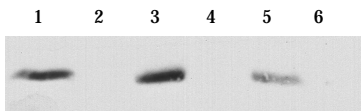
Storage: -20°C

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

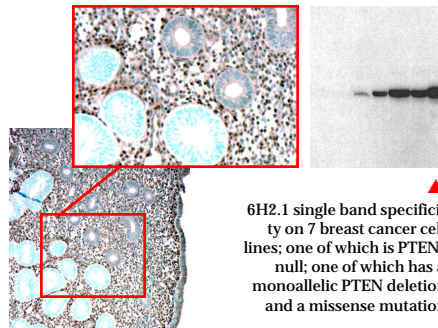
Storage: -20°C

Stability: 1 year

Catalog Information

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

Quality Control and Comparative Analyses



▲ 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

▲ 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

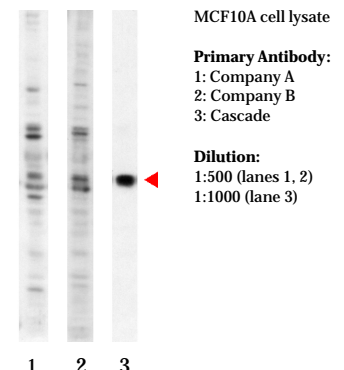
Storage: -20°C

Stability: 2 years

Catalog Information

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

Quality Control and Comparative Analyses



MCF10A cell lysate

Primary Antibody:
1: Company A
2: Company B
3: Cascade

Dilution:
1:500 (lanes 1, 2)
1:1000 (lane 3)