PTEN (A2B1): sc-7974

BACKGROUND
As human tumors progress to advanced stages, one genetic alteration that occurs at high frequency is a loss of heterozygosity (LOH) at chromosome 10q23.31. Mapping of homozygous deletions on this chromosome led to the isolation of the PTEN gene, also designated MMAC1 (for mutated in multiple advanced cancers) and TEP1. This candidate tumor suppressor gene exhibits a high frequency of mutations in human glioblastomas and is also mutated in other cancers, including sporadic brain, breast, kidney and prostate cancers. PTEN has been associated with Cowden disease, an autosomal dominant cancer predisposition syndrome. The PTEN gene product is a putative protein tyrosine phosphatase that is localized to the cytoplasm, and it shares extensive homology with the cytoskeletal proteins tensin and auxilin. Gene transfer studies have indicated that the phosphatase domain of PTEN is essential for growth suppression of glioma cells.

CHROMOSOMAL LOCATION
Genetic locus: PTEN (human) mapping to 10q23.31; Pten (mouse) mapping to 19C1.

SOURCE
PTEN (A2B1) is a mouse monoclonal antibody raised against amino acids 388-400 of PTEN of human origin.

PRODUCT
Each vial contains 200 µg IgG1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PTEN (A2B1) is available conjugated to agarose (sc-7974 AC), 500 µg/0.25 ml (1 ml of cell lysate), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

PTEN (A2B1) is recommended for detection of PTEN of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for PTEN siRNA (h): sc-29459, PTEN shRNA Plasmid (h): sc-29459-SH, PTEN shRNA Plasmid (m): sc-36326-SH, PTEN shRNA (h) Lentiviral Particles: sc-29459-V and PTEN shRNA (m) Lentiviral Particles: sc-36326-V.

Molecular Weight of PTEN: 55 kDa.

Positive Controls: SH-SY5Y cell lysate: sc-3812, A-431 whole cell lysate: sc-2201 or CSH/1B11/2 cell lysate: sc-3801.

STORAGE
Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA

![PTEN (A2B1) HRP: sc-7974 HRP. Direct western blot analysis of PTEN expression in A-431 (A), SH-SY5Y (B), MCF7 (C), CSH/1B11/2 (D) and HeLa (E) whole cell lysates and mouse brain tissue extract (F).](image)

![PTEN (A2B1) sc-7974. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human upper stomach tissue showing staining of extracellular space (B).](image)

SELECT PRODUCT CITATIONS

RESEARCH USE
For research use only, not for use in diagnostic procedures.

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