

#9554 Store at -20°C

Phospho-PTEN (Ser380/Thr382/383) Antibody

100 µl
 (10 Western mini-blots)



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This product is for *in vitro* research use only and is not intended for use in humans or animals.
 This product is not intended for use as a therapeutic or in diagnostic procedures.

Entrez-Gene ID # 5728
Swiss-Prot Acc. # P60484

Applications	Species Cross-Reactivity	Molecular Wt.	Source
W, IP Endogenous	H, M, R	54 kDa	Rabbit

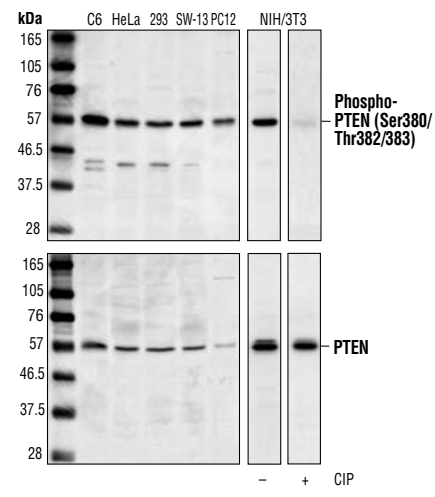
Background: PTEN (phosphatase and tensin homologue deleted on chromosome ten), also referred to as MMAC (mutated in multiple advanced cancers), phosphatase is a tumor suppressor implicated in a wide variety of human cancers (1). PTEN encodes the 403 amino acid polypeptide originally described as a dual-specificity protein phosphatase (2). The main substrates of PTEN are inositol phospholipids generated by the activation of the phosphoinositide 3 kinase (PI3K) (3). PTEN is a major negative regulator of the PI3K/Akt signaling pathway (1,4-5). PTEN possesses a carboxy-terminal noncatalytic regulatory domain containing three phosphorylation sites (Ser380, Thr382 and Thr383), which regulates its stability and may play an important role in control of its biological activity (6,7). PTEN also regulates p53 protein levels and activity (8) and is involved in G protein coupled signaling during chemotaxis (9,10).

Specificity/Sensitivity: Phospho-PTEN (Ser380/Thr382/383) Antibody detects endogenous levels of PTEN only when phosphorylated at serine 380/threonine 382/383.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic phospho-peptide (KLH-coupled) corresponding to residues surrounding Ser380/Thr382/383 of human PTEN. Antibodies are purified by protein A and peptide affinity chromatography.

Background References:

- (1) Cantley, L.C. and Neel, B.G. (1999) *Proc. Natl. Acad. Sci. USA* 96, 4240-4245.
- (2) Myers, M.P. et al. (1997) *Proc. Natl. Acad. Sci. USA* 94, 9052-9057.
- (3) Myers, M.P. et al. (1998) *Proc. Natl. Acad. Sci. USA* 95, 13513-13518.
- (4) Wan, X. and Helman, L.J. (2003) *Oncogene* 22, 8205-8211.



Western blot analysis of extracts from various cell lines, using Phospho-PTEN (Ser380/Thr382/Thr383) Antibody (upper) or PTEN Antibody #9552 (lower). The phospho-specificity of the antibody was confirmed by treating the membrane with calf intestinal alkaline phosphatase (CIP) after Western transfer.

- (5) Wu, X. et al. (1998) *Proc. Natl. Acad. Sci. USA* 95, 15587-15591.
- (6) Vazquez, F. et al. (2000) *Mol. Cell. Biol.* 20, 5010-5018.
- (7) Torres, J. and Pulido, R. (2001) *J. Biol. Chem.* 276, 993-998.
- (8) Freeman, D.J. et al. (2003) *Cancer Cell* 3, 117-130.
- (9) Funamoto, S. et al. (2002) *Cell* 109, 611-623.
- (10) Iijima, M. and Devreotes, P. (2002) *Cell* 109, 599-610.

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

***Species cross-reactivity is determined by Western blot.**
****Anti-rabbit secondary antibodies must be used to detect this antibody.**

Recommended Antibody Dilutions:
 Western blotting 1:1000
 Immunoprecipitation 1:50

For application specific protocols please see the web page for this product at www.cellsignal.com.

Companion Products:

- Phospho-PTEN (Ser380) Antibody #9551
- PTEN Antibody #9552
- PTEN (26H9) Mouse mAb #9556
- Phospho-PTEN (Ser380/Thr382/383) (44A7) Rabbit mAb #9549
- Phototope[®]-HRP Western Blot Detection System, Anti-rabbit IgG, HRP-linked Antibody #7074
- Prestained Protein Marker, Broad Range (Premixed Format) #7720
- Biotinylated Protein Ladder Detection Pack #7727
- 20X LumiGLO[®] Reagent and 20X Peroxide #7003
- PTEN (138G6) Rabbit mAb #9559

Please visit www.cellsignal.com for a complete listing of recommended companion products.

IMPORTANT: For Western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.

Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide
Species Cross-Reactivity Key: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebra fish B—bovine
 Dg—dog Pg—pig Sc—S. cerevisiae All—all species expected Species enclosed in parentheses are predicted to react based on 100% sequence homology.