

Phospho-PTEN (Ser380/Thr382/383) (44A7) Rabbit mAb

- Small 100 µl (10 Western mini-blot)
- Large 300 µl (30 Western mini-blot)

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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.	Isotype
W Endogenous	H, M, R, Mk	54 kDa	Rabbit IgG**

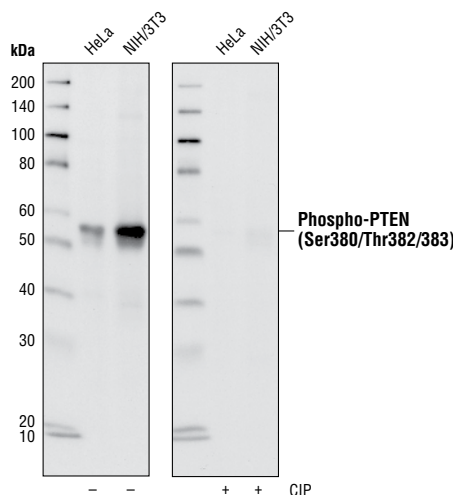
Background: PTEN (phosphatase and tensin homologue deleted on chromosome ten), also referred to as MMAC (mutated in multiple advanced cancers), is a tumor suppressor implicated in a wide variety of human cancers (1). PTEN encodes the 403 amino acid polypeptide originally described as a dual-specificity 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) (44A7) Rabbit mAb detects endogenous levels of PTEN only when phosphorylated at Ser380, Thr382 and Thr383.

Source/Purification: Monoclonal antibody is produced by immunizing rabbits with a synthetic phospho peptide (KLH-coupled) corresponding to residues around Ser380, Thr382 and Thr383 of human PTEN.

Background References:

- | | |
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| (1) Cantley, L.C. and Neel, B.G. (1999) <i>Proc. Natl. Acad. Sci. USA</i> 96, 4240-4245. | (6) Vazquez, F. et al. (2000) <i>Mol. Cell. Biol.</i> 20, 5010-5018. |
| (2) Myers, M.P. et al. (1997) <i>Proc. Natl. Acad. Sci. USA</i> 94, 9052-9057. | (7) Torres, J. and Pulido, R. (2001) <i>J. Biol. Chem.</i> 276, 993-998. |
| (3) Myers, M.P. et al. (1998) <i>Proc. Natl. Acad. Sci. USA</i> 95, 13513-13518. | (8) Freeman, D.J. et al. (2003) <i>Cancer Cell</i> 3, 117-130. |
| (4) Wan, X. and Helman, L.J. (2003) <i>Oncogene</i> 22, 8205-8211. | (9) Funamoto, S. et al. (2002) <i>Cell</i> 109, 611-623. |
| (5) Wu, X. et al. (1998) <i>Proc. Natl. Acad. Sci. USA</i> 95, 15587-15591. | (10) Iijima, M. and Devreotes, P. (2002) <i>Cell</i> 109, 599-610. |



Western blot analysis of extracts from HeLa and NIH/3T3 cells, using Phospho-PTEN (Ser380/Thr382/383) (44A7) Rabbit mAb. Membranes were either left untreated (-) or treated with (+) calf intestinal phosphatase (CIP) post Western transfer to verify phospho-specificity of the antibody.

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. 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

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

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.