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**#9554** Store at -20C

## Phospho-PTEN (Ser380/Thr382/383) Antibody

**For Research Use Only. Not for Use in Diagnostic Procedures.**

<b>Applications:</b> W, IP	<b>Reactivity:</b> H M R	<b>Sensitivity:</b> Endogenous	<b>MW (kDa):</b> 54	<b>Source/Isotype:</b> Rabbit	<b>UniProt ID:</b> #P60484	<b>Entrez-Gene Id:</b> 5728
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### Product Usage Information

#### Application

Western Blotting  
Immunoprecipitation

#### Dilution

1:1000  
1:50

### 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.

### 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 phosphopeptide corresponding to residues surrounding Ser380/Thr382/383 of human PTEN. Antibodies are purified by protein A and peptide affinity chromatography.

### 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 a 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 with three phosphorylation sites (Ser380, Thr382, and Thr383) that regulate PTEN stability and may affect its biological activity (6,7). PTEN regulates p53 protein levels and activity (8) and is involved in G protein-coupled signaling during chemotaxis (9,10).

### Background References

1. Cantley, L.C. and Neel, B.G. (1999) *Proc Natl Acad Sci USA* 96, 4240-5.
2. Myers, M.P. et al. (1997) *Proc Natl Acad Sci USA* 94, 9052-7.
3. Myers, M.P. et al. (1998) *Proc Natl Acad Sci USA* 95, 13513-8.
4. Wan, X. and Helman, L.J. (2003) *Oncogene* 22, 8205-11.
5. Wu, X. et al. (1998) *Proc Natl Acad Sci USA* 95, 15587-91.
6. Vazquez, F. et al. (2000) *Mol Cell Biol* 20, 5010-8.
7. Torres, J. and Pulido, R. (2001) *J Biol Chem* 276, 993-8.
8. Freeman, D.J. et al. (2003) *Cancer Cell* 3, 117-30.
9. Funamoto, S. et al. (2002) *Cell* 109, 611-23.
10. Iijima, M. and Devreotes, P. (2002) *Cell* 109, 599-610.

### Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

### Western Blot Buffer

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

### Applications Key

**W:** Western Blotting **IP:** Immunoprecipitation

### Cross-Reactivity Key

**H:** Human **M:** Mouse **R:** Rat

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