

# PTEN Blocking Peptide

✓ 100 µg



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**Description:** This peptide is used to block #9188 PTEN (D4.3) XP® Rabbit mAb in peptide dot blot reactivity.

**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).

**Quality Control:** The quality of the peptide was evaluated by reversed-phase HPLC and by mass spectrometry. The peptide detects #9188 PTEN (D4.3) XP® Rabbit mAb in peptide dot blot.

**Directions for Use:** Use as a blocking reagent to evaluate the specificity of antibody reactivity in peptide dot blot protocols.

## Background References:

- (1) Cantley, L.C. and Neel, B.G. (1999) *Proc. Natl. Acad. Sci. USA* 96, 4240–4245.
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- (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.
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- (9) Funamoto, S. et al. (2002) *Cell* 109, 611–623.
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**Entrez-Gene ID** #5728

**UniProt ID** #P60484

**Storage:** Supplied in 20 mM potassium phosphate (pH 7.0), 50 mM NaCl, 0.1 mM EDTA, 1 mg/ml BSA, 5% glycerol and 1% DMSO. Store at -20°C.

**For application specific protocols please see the web page for this product at [www.cellsignal.com](http://www.cellsignal.com).**

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