

#4005 Store at -20C

PTEN (D4.3) XP® Rabbit mAb (Biotinylated)


Cell Signaling
TECHNOLOGY®

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

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, IP	H M R Mk Dg	Endogenous	54	Rabbit IgG	#P60484	5728

Product Usage Information	Application	Dilution
	Western Blotting	1:1000
	Immunoprecipitation	1:50
Storage	Supplied in 136 mM NaCl, 2.6 mM KCl, 12 mM sodium phosphate (pH 7.4) dibasic, 2 mg/ml BSA, and 50% glycerol. Store at -20°C. Do not aliquot the antibodies.	
Specificity / Sensitivity	PTEN (D4.3) XP® Rabbit mAb (Biotinylated) detects endogenous levels of total PTEN protein.	
Species predicted to react based on 100% sequence homology:	Chicken	
Source / Purification	Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues in the carboxy-terminal sequence of human PTEN protein.	
Product Description	This Cell Signaling Technology (CST) antibody is conjugated to biotin under optimal conditions. The unconjugated PTEN (D4.3) XP® Rabbit mAb #9188 reacts with human, mouse, rat and monkey PTEN protein. PTEN (D4.3) XP® Rabbit mAb (Biotinylated) also recognizes PTEN in these species.	

MW (kDa)

54

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	<ol style="list-style-type: none"> 1. Cantley, L.C. and Neel, B.G. (1999) <i>Proc Natl Acad Sci USA</i> 96, 4240-5. 2. Myers, M.P. et al. (1997) <i>Proc Natl Acad Sci USA</i> 94, 9052-7. 3. Myers, M.P. et al. (1998) <i>Proc Natl Acad Sci USA</i> 95, 13513-8. 4. Wan, X. and Helman, L.J. (2003) <i>Oncogene</i> 22, 8205-11. 5. Wu, X. et al. (1998) <i>Proc Natl Acad Sci USA</i> 95, 15587-91. 6. Vazquez, F. et al. (2000) <i>Mol Cell Biol</i> 20, 5010-8. 7. Torres, J. and Pulido, R. (2001) <i>J Biol Chem</i> 276, 993-8. 8. Freeman, D.J. et al. (2003) <i>Cancer Cell</i> 3, 117-30. 9. Funamoto, S. et al. (2002) <i>Cell</i> 109, 611-23. 10. Iijima, M. and Devreotes, P. (2002) <i>Cell</i> 109, 599-610.

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

WB: Western Blotting **IP:** Immunoprecipitation

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster
X: Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

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