Revision 1

#4326 Store at -20C

PTEN (D4.3) XP® Rabbit mAb (Sepharose® Bead Conjugate)

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:
IP	H M R Mk Dg	Endogenous	54	Rabbit IgG	#P60484	5728

Product Usage Information

Application	Dilution
Immunoprecipitation	1:20

Storage

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

Specificity / Sensitivity

PTEN (D4.3) XP® Rabbit mAb (Sepharose® Bead Conjugate) 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.

Product Description

This Cell Signaling Technology antibody is immobilized via covalent binding of primary amino groups to N-hydroxysuccinimide (NHS)-activated Sepharose® beads. PTEN (D4.3) XP® Rabbit mAb (Sepharose® Bead Conjugate) is useful for the immunoprecipitation of PTEN protein.

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

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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).

Applications Key

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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Limited Uses