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

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

Applications: IP	Reactivity: All	Sensitivity: Endogenous	MW (kDa): 54	Source/Isotype: Rabbit IgG	UniProt ID: #P60484	Entrez-Gene Id: 5728
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Product Usage Information

Application

Immunoprecipitation

Dilution

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.

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.

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).

Applications Key

IP: Immunoprecipitation

Cross-Reactivity Key

All: All Species Expected

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