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Cell Signaling

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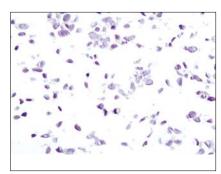
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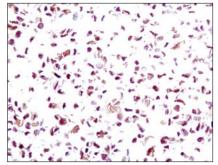
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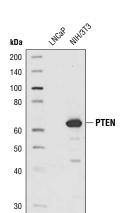


Immunohistochemical analysis of paraffin embedded LNCaP (left) and NIH/3T3 (right) cell pellets using PTEN (138G6) Rabbit mAb #9559.

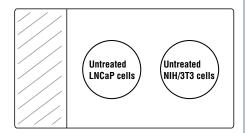
Description: Each control slide contains formalin fixed, paraffin-embedded LNCaP and NIH/3T3 cell pellets. NIH/ 3T3 cells express PTEN while LNCaP cells do not express PTEN. Western blot analysis was performed on extracts derived from the same cells to verify PTEN expression.

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 level and activity (8) and is involved in G protein coupled signaling during chemotaxis (9.10).

Applications: These slides are intended for use in immunohistochemical assays. Please see the Companion Products for a list of products that can be used with these slides.



Western blot analysis of extracts from LNCaP or NIH/3T3 cells using PTEN (138G6) Rabbit mAb #9559. NIH/3T3 cells express PTEN and LNCaP cells do not express PTEN. This assay serves to verify PTEN expression.



Entrez-Gene ID # 5728 Swiss-Prot Acc. # P60484

Storage: Store at 4° C.

Optimal staining is achieved if slides are stained following CST's standard IHC protocols and are used within 8 weeks of assay date; however, signals may persist beyond two months.

For application specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended companion products.

Background References:

- (1) Cantley, L.C. and Neel, B.G. (1999) Proc. Natl. Acad. Sci. USA 96. 4240-4245.
- (2) Myers, M.P. et al. (1997) Proc. Natl. Acad. Sci. USA 94, 9052-9057.
- (3) Myers, M.P. et al. (1998) Proc. Natl. Acad. Sci. USA 95, 13513-13518.
- (4) Wan, X. and Helman, L.J. (2003) Oncogene 22, 8205–8211.
- (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
- (8) Freeman, D.J. et al. (2003) Cancer Cell 3, 117-130.
- (9) Funamoto, S. et al. (2002) Cell 109, 611-623.
- (10) lijima, M. and Devreotes, P. (2002) Cell 109, 599-610