PRODUCT INFORMATION

PTEN (human recombinant)

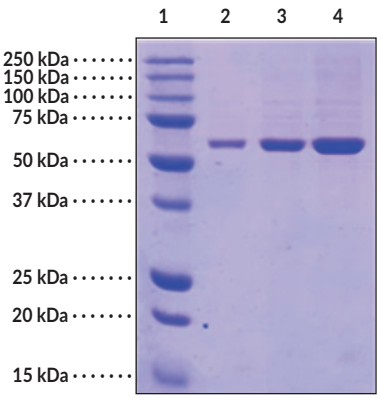
Item No. 10009746

Overview and Properties

Synonyms:	MMAC1, Phosphatase and Tensin Homology on Chromosome 10, Phosphatidylinositol 3-phosphatase, TEP1
Source:	Human recombinant N-terminal His-tagged protein purified from S*f*21 cells
Uniprot No.:	P60484
Molecular Weight:	50.8 kDa
Storage:	-80°C (as supplied)
Stability:	≥6 months
Purity:	***batch specific*** (≥95% estimated by SDS-PAGE)
Supplied in:	50 mM Tris-HCl, pH 8.0, 100 mM sodium chloride, 5 mM DTT, and 20% glycerol
Protein Concentration:	***batch specific*** mg/ml
Additional Information:	This protein has not been tested for enzyme activity

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Image



Lane 1: MW Markers
Lane 2: PTEN (2 µg)
Lane 3: PTEN (5 µg)
Lane 4: PTEN (10 µg)

Representative gel image shown; actual purity may vary between each batch.

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Description

Phosphatase and tensin homology on chromosome 10 (PTEN) functions as a key regulatory enzyme in many signal transduction pathways by dephosphorylating proteins and lipids such as AKT and phosphatidylinositol 3,4,5-trisphosphate (PIP3). PTEN interacts with many other proteins to regulate cell division and migration, as well as promoting apoptosis when necessary.[1] Mutation of PTEN results in many human cancers including melanoma and prostate carcinoma, making PTEN an important tumor suppressor.[2,3] PTEN is expressed in almost all tissues of the body as a 403 amino acid protein with an estimated molecular weight of 47 kDa, however the actual migration observed on western blot may vary among distinct samples.[4]

References

1. Di Cristofano, A. and Pandolfi, P.P. The multiple roles of PTEN in tumor suppression. *Cell* **100**, 387-390 (2000).
2. Vivanco, I. and Sawyers, C.L. The phosphatidylinositol 3-kinase-AKT pathway in human cancer. *Nat. Rev. Cancer* **2**, 489-501 (2002).
3. Dahia, P.L.M. PTEN, a unique tumor suppressor gene. *Endocr. Relat. Cancer* **7**, 115-129 (2000).
4. Steck, P.A., Pershouse, M.A., Jasser, S.A., *et al.* Identification of a candidate tumour suppressor gene, MMAC1, at chromosome 10q23.3 that is mutated in multiple advanced cancers. *Nat. Genet.* **15**, 356-362 (1997).

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