

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 Sf21 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)

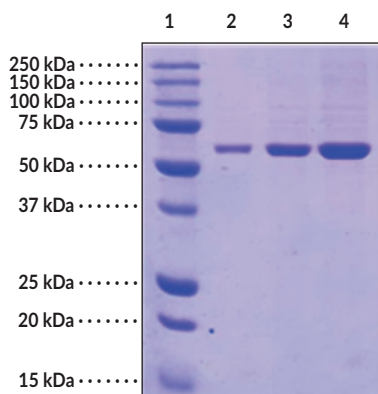
Supplied in: 50 mM Tris-HCl, pH 8.0, 100 mM sodium chloride, 5 mM DTT, and 20% glycerol

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.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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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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