

Product Information



PTEN Western Ready Control

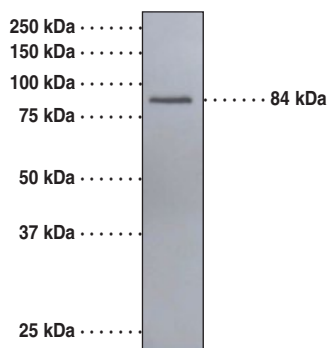
Item No. 10009747

- Synonyms:** MMAC1, Phosphatase and Tensin Homology on Chromosome 10, Phosphatidylinositol 3-phosphatase, TEP1
- Source:** Human recombinant GST-tagged protein expressed in *E. coli*
- M_r:** 84 kDa (GST fusion)
- Purity:** Single band on a western blot when probed with Cayman's PTEN Polyclonal Antibody (Item No. 10005059)
- Supplied in:** Laemmli buffer (2% SDS, 10% glycerol, 62.5 mM Tris-HCl pH 6.8, 5% 2-mercaptoethanol, bromophenol blue)
- Stability:** ≥2 years at -20°C
- Applications:** Positive control for western blotting

PTEN dephosphorylates proteins and lipids such as AKT and phosphatidylinositol 3,4,5-trisphosphate (PIP₃) and therefore functions as a key regulatory enzyme in a central signal transduction pathway. 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.¹ PTEN interacts with many other proteins to regulate cell division and migration as well as promoting apoptosis when necessary.² Mutation of PTEN results in many human cancers including melanoma and prostate carcinoma.^{3,4}

Laboratory Procedures

Western ready controls are designed to serve as positive controls on western blots. This PTEN western ready control is supplied pre-boiled in 55 µl of Laemmli buffer. To use, thaw and load 10 µl of PTEN western ready control per well and follow a standard western blotting protocol. The amount needed per well will depend on the antibody and detection system used.



Western blot of human recombinant PTEN probed with Cayman's PTEN Polyclonal Antibody (Item No. 10005059)

References

1. 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. *Nature Genet.* **15**, 356-362 (1997).
2. Di Cristofano, A. and Pandolfi, P.P. The multiple roles of PTEN in tumor suppression. *Cell* **100**, 387-390 (2000).
3. Vivanco, I. and Sawyers, C.L. The phosphatidylinositol 3-kinase-AKT pathway in human cancer. *Nature Reviews Cancer* **2**, 489-501 (2002).
4. Dahia, P.L.M. PTEN, a unique tumor suppressor gene. *Endocrine-Related Cancer* **7**, 115-129 (2000).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/10009747

Cayman Chemical

Mailing address
1180 E. Ellsworth Road
Ann Arbor, MI
48108 USA

Phone
(800) 364-9897
(734) 971-3335

Fax
(734) 971-3640

E-Mail
custserv@caymanchem.com

Web
www.caymanchem.com

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

Cayman Chemical Company makes **no warranty or guarantee** of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals hereof. Cayman warrants **only** to the original customer that the material will **meet our specifications at the time of delivery.**

Cayman will carry out its delivery obligations with due care and skill. Thus, in no event will Cayman have **any obligation or liability**, whether in tort (including negligence) or in contract, for any direct, indirect, incidental or consequential damages, even if Cayman is informed about their possible existence.

This limitation of liability does not apply in the case of intentional acts or negligence of Cayman, its directors or its employees. Buyer's **exclusive remedy** and Cayman's sole liability hereunder shall be limited to a **refund** of the purchase price, or at Cayman's option, the **replacement**, at no cost to Buyer, of all material that does not meet our specifications.

Said refund or replacement is conditioned on Buyer giving written notice to Cayman within thirty (30) days after arrival of the material at its destination. Failure of Buyer to give said notice within thirty (30) days shall constitute a waiver by Buyer of all claims hereunder with respect to said material.

For further details, please refer to our **Warranty and Limitation of Remedy** located on our website and in our catalog.

Copyright Cayman Chemical Company, 02/08/2012