

Product Information



PTEN Blocking Peptide

Catalog No. 10007073

Sold under license from Millipore
US Patents: 6,262,242 and 6,482,795
Pending Patent: 20030139324

PTEN dephosphorylates proteins and lipids such as AKT and phosphatidylinositol 3,4,5-triphosphate (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

This vial contains 200 µg peptide in 200 µl TBS, pH 7.4, containing 0.1% BSA and 0.02% sodium azide. The PTEN blocking peptide (human PTEN amino acids 254-270) can be used in conjunction with Cayman's PTEN Polyclonal Antibody (Catalog No. 10005059) to block protein-antibody complex formation during immunochemical analysis of PTEN.

Store this peptide solution at -20°C. It will be stable for at least two years. To block antibody/protein complex formation, the following procedure is recommended:

1. Mix the PTEN Polyclonal Antibody (Catalog No. 10005059) and blocking peptide together in a 1:1 (v/v) ratio in a microfuge tube. For example, mix 20 µl of antibody and 20 µl of peptide.*
2. Incubate for 1 hour at room temperature with occasional mixing prior to further dilution and application of the mixture to the immunoblot.
3. Dilute the mixture to the final working antibody concentration and apply to the slide or membrane as usual.

*This is a recommended mixture. The minimum amount of peptide needed for complete blocking has not been precisely determined and may vary depending on the sample being analyzed. The amount of peptide required may need to be increased if sufficient blocking does not occur.

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 Product

PTEN Polyclonal Antibody - Cat. No. 10005059

WARNING: THIS PRODUCT IS NOT INTENDED OR APPROVED FOR HUMAN OR VETERINARY USE. USE OF THIS PRODUCT FOR HUMAN OR ANIMAL TESTING IS EXTREMELY HAZARDOUS AND MAY RESULT IN DISEASE, SEVERE INJURY, OR DEATH.

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 under separate cover to the MSD supervisor at 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.**

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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