Technical Data Sheet

Purified Mouse Anti-PTEN

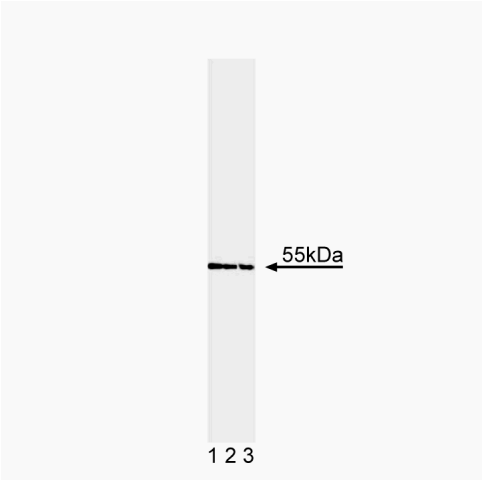
Product Information

Material Number:	**559600**
Alternate Name:	MMAC1, TEP1
Size:	0.1 mg
Concentration:	0.5 mg/ml
Clone:	A2B1
Immunogen:	Human C-terminal PTEN Peptide
Isotype:	Mouse (BALB/c) IgG1, κ
Reactivity:	QC Testing: Human Tested in Development: Mouse
Target MW:	55 kDa
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

Cancer can develop when cells escape normal growth control mechanisms through mutations in proto-oncogenes or tumor suppressor genes. A characteristic of most oncogene and tumor suppressor gene products is that they are components of signal transduction pathways that are essential for maintaining cellular homeostasis. PTEN (phosphatase and tensin homolog), also known as MMAC1 (mutated in multiple advanced cancers 1), is a tumor suppressor gene that is mutated at high frequency in multiple tumor types. The protein encoded by PTEN is a phosphatase that preferentially dephosphorylates phosphoinositide substrates. It is believed that a mechanism by which PTEN mutations cause tumors is the loss of its negative control on the phosphoinositide 3-kinase signaling pathway that regulates cell growth and survival. PTEN also plays a role in the maintenance of hematopoietic stem cells.

The A2B1 monoclonal antibody recognizes PTEN, regardless of phosphorylation status.



Western blot analysis of PTEN. *Human lung fibroblast lysate from the WI-38 cell line (ATCC Cat. No. CCL-75™) was probed with Purified Mouse anti-PTEN (Cat. No. 559600) antibody at a concentration of 6.0 (lane 1), 2.0 (lane 2), or 0.5 µg/ml (lane 3). PTEN is identified as a protein of ~55 kDa.*

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
Store undiluted at 4°C.

Application Notes

Application

Western blot	Routinely Tested

Recommended Assay Procedure:

WI-38 (ATCC Cat. No. CCL-75™) cells are recommended as a positive control.

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Suggested Companion Products

Catalog Number	Name	Size	Clone
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
4. Sodium azide is a reversible inhibitor of oxidative metabolism; therefore, antibody preparations containing this preservative agent must not be used in cell cultures nor injected into animals. Sodium azide may be removed by washing stained cells or plate-bound antibody or dialyzing soluble antibody in sodium azide-free buffer. Since endotoxin may also affect the results of functional studies, we recommend the NA/LE (No Azide/Low Endotoxin) antibody format, if available, for in vitro and in vivo use.
5. All other brands are trademarks of their respective owners.

References

Cantley LC, Neel BG. New insights into tumor suppression: PTEN suppresses tumor formation by restraining the phosphoinositide 3-kinase/AKT pathway. *Proc Natl Acad Sci U S A.* 1999; 96(8):4240-4245. (Biology)

Steck PA, Pershouse MA, Jasser SA, et al. Identification of a candidate tumour suppressor gene, MMAC1 at chromosome 10q23.3 that is mutated in multiple advanced cancers. *Nat Genet.* 1997; 15(4):356-362. (Biology)

Suzuki A, de la Pompa JL, Stambolic V, et al. High cancer susceptibility and embryonic lethality associated with mutation of the PTEN tumor suppressor gene in mice. *Curr Biol.* 1998; 8(21):1169-1178. (Biology)

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