

Product Specification Sheet

Human Phosphatase and tensin homolog (PTEN, MMAC, TEP-1) Protein and antibodies

Cat. PTEN11-A	Rabbit anti-human PTEN peptide IgG, aff pure	SIZE: 100 ul
Cat. PTEN15-C	Recombinant Human PTEN-GST protein control for WB	SIZE: 100 ul

PTEN (phosphatase and tensin homologue deleted on chromosome ten) is a dual-specificity phosphatase (with both protein and lipid phosphatase activity) first identified as a tumor suppressor gene (1,2). PTEN indirectly activates the AKT/PI3K pathway, an important signaling pathway for cell growth and proliferation by keeping levels of the second messenger PIP3 low, thereby preventing phosphoinositide-dependent kinase-1 (PDK-1) from phosphorylating and activating AKT (3). Expression of wild-type PTEN causes growth arrest in many cancer cell lines, but expression of a PTEN protein containing a mutation that blocks its lipid phosphatase activity failed to suppress growth of glioma cell lines suggesting that the tumor suppressive effect of PTEN is mediated solely by its lipid phosphatase activity (4). Other activities include the inhibition of insulin stimulated MAPK activation by blocking the insulin-receptor substrate (IRS)-1 phosphorylation and assembly of the IRS-1/Grb2/Sos complex (5).

Source of Antigen and Antibodies

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Antigen	a 16-amino acid peptide from near the C-terminus of human PTEN (Genbank accession No. P60484).
Ab Host/type	Rabbit, polyclonal IgG, aff pure, (cat # PTEN11-A) in PBS, pH 7.5, 0.1% BSA and 0.05% azide
2-ab	Goat Anti-rabbit IgG-HRP cat # 20320 (AP, biotin, FITC conjugates also available)
-ve control IgG	# 20009-1, Rabbit (non-immune) IgG, purified, suitable for ELISA, Western, IHC as -ve control

Human PTEN protein (full length; gene accession # O00633) was expressed as fusion protein (T7 tag-GST tag- PTEN) in E.coli and purified (>95% with major band at ~82kDa). **PTEN (cat # PTEN11-C) protein for WB +ve control**, is formulated in SDS-PAGE sample buffer (reduced). This preparation is biologically inactive. It is not suitable for ELISA or other applications where native protein is required. It is supplied in 100 ul/vial. For WB, heat once and load 10 ul/lane and visualize with appropriate antibodies (cat # **PTEN11-A** or other antibodies). This preparation is intended for qualitative purpose and not to serve as standard of known concentration. Store frozen in suitable aliquots. Do not freeze, thaw, or heat repeatedly.

Form & Storage of Antibodies/Peptide Control

Affinity pure IgG

100 ug/100ul solution lyophilized powder

Supplied in **Buffer:** PBS+0.1% BSA

Reconstitute powder in PBS at 1mg/ml

Storage

Short-term: unopened, undiluted liquid vials at -200C and powder at 4oC or -20oC..

Long-term: at -20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at -20oC or below.

Shipping: 4oC for solutions and room temp for powder

Recommended Usage

Western Blotting (1-5 ug/ml for affinity pure IgG using ECL technique). ~40-42 Kda. PC3 cells of recombinant PTEN protein can be used as control.

ELISA: Control antigen can be used to coat ELISA plates at 1 ug/ml and detected with antibodies (0.5-1 ug/ml for affinity pure).

Specificity & Cross-reactivity

PTEN11-A reacts with human and mouse PTEN. from mouse, rat, and human. It may crossreact with PTEN from other species. Antibody crossreactivity in various species is not confirmed. Purified PTEN (cat # PTEN11-C) can be used as +ve control for western.

General References: Liu (1997) Science 275, 1943-1947; Steck PA (1997) Nat. Genet. 15, 356-362; Wu X (1998) PNAS 95, 15587-1591; Myers MP (1998) 95, 13513-13518; Weng LP (2001) Hum. Mol. Gnet. 10, 605-616;

*This product is for in vitro research use only.

Related material available from ADI

Anti-GAD65; Anti-GABA, -Glutamate transporter; Anti-Vesicular GABA transporter (VGAT)

Western Blot recycling kit (Use the same blot to probe with multiple antibodies GAD65 and GAD67) **recycle blot at room temp in 5-10 min;** No mercaptoethanol or heating required).

PTEN11-A-C

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