

Product Specification Sheet

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

<input type="checkbox"/> <b>Cat.</b> PTEN15-R-10	Recombinant purified Human PTEN-GST fusion Protein	<b>SIZE:</b> 10 ug
<input type="checkbox"/> <b>Cat.</b> PTEN15-R-50	Recombinant purified Human PTEN-GST fusion Protein	<b>SIZE:</b> 50 ug

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**

Human PTEN protein (full length; gene accession # O00633) was expressed as fusion protein (GST tag- PTEN) in E.coli and purified (>95% with major band at ~82kDa). Purified Human PTEN protein is supplied in 10mM Tris-HCl, pH 8.0, 50mM NaH<sub>2</sub>PO<sub>4</sub> and 8M urea at a conc. of 1mg/ml (lot specific conc. is provided on the vial). Store at -20°C or below. Avoid frequent freeze and thaw.

**Biological activity** not tested.

**Storage**

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

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

**Stability:** 6-12 months at -20°C or below.

**Shipping:** 4°C for solutions and room temp for powder

**Recommended Usage**

**Western Blotting**

**ELISA**

**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).

PTEN15-R-10-50

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