

# Active Phosphatase And Tensin Homolog (PTEN) Instruction Manual

## SBPF360Hu01

Homo sapiens (Human)

<b>Buffer Formulation</b>	20mM Tris, 150mM NaCl, pH8.0, containing 1mM EDTA, 1mM DTT, 0.01% SKL, 5% Trehalose and Proclin300.
<b>Traits</b>	Freeze-dried powder
<b>Purity</b>	> 90%
<b>Isoelectric Point</b>	5.9
<b>Applications</b>	Cell culture; Activity Assays.

### ACTIVITY TEST

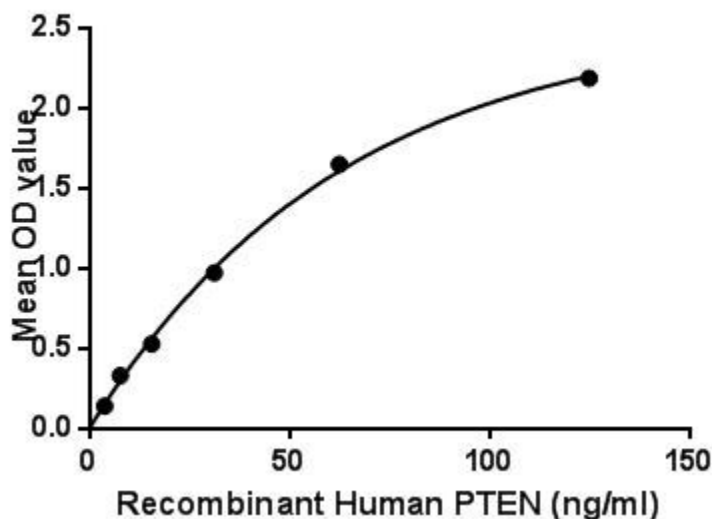


Figure. The binding activity of PTEN with TP53.

Phosphatase and tensin homolog (PTEN) is a protein is widely expressed throughout the body. PTEN protein acts as a phosphatase to dephosphorylate phosphatidylinositol (3,4,5)-trisphosphate (PtdIns (3,4,5)P3 or PIP3). PTEN specifically catalyses the dephosphorylation of the 3' phosphate of the inositol ring in PIP3, resulting in the biphosphate product PIP2 (PtdIns (4,5) P2). PTEN also has weak protein phosphatase activity, but this activity is also crucial for its role as a tumor suppressor. PTEN's protein

phosphatase activity may be involved in the regulation of the cell cycle, preventing cells from growing and dividing too rapidly. Besides, Tumor Protein p53 (TP53) has been identified as an interactor of PTEN, thus a binding ELISA assay was conducted to detect the interaction of recombinant human PTEN and recombinant human TP53. Briefly, PTEN were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100 $\mu$ L were then transferred to TP53-coated microtiter wells and incubated for 2h at 37°C. Wells were washed with PBST and incubated for 1h with anti-PTEN pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody, wells were aspirated and washed 3 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37°C. Finally, add 50 $\mu$ L stop solution to the wells and read at 450nm immediately. The binding activity of PTEN and TP53 was shown in Figure 1, and this effect was in a dose dependent manner.

## **USAGE**

Reconstitute in 20mM Tris, 150mM NaCl (pH8.0) to a concentration of 0.1-1.0 mg/mL. Do not vortex.

## **STORAGE**

Avoid repeated freeze/thaw cycles. Store at 2-8°C for one month. Aliquot and store at -80°C for 12 months.

## **STABILITY**

The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37°C for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.

## **Image**



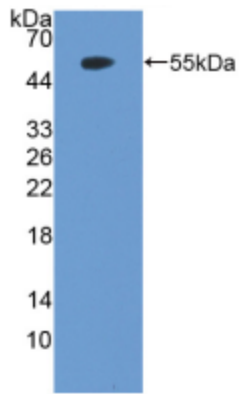


Figure. Western Blot

**[IMPORTANT NOTE]**

The kit is designed for research use only, we will not be responsible for any issue if the kit was used in clinical diagnostic or any other procedures.