

# TPIP (K-15): sc-85186

## BACKGROUND

TPIP, also known as TPTE2 (transmembrane phosphoinositide 3-phosphatase and tensin homolog 2), phosphatidylinositol-3,4,5-trisphosphate 3-phosphatase TPTE2, lipid phosphatase TPIP, or TPTE and PTEN homologous inositol lipid phosphatase, is a 522 amino acid multi-pass membrane protein containing a C2 tensin-type domain, and one phosphatase tensin-type domain. Localizing to the endoplasmic reticulum membrane, TPIP exists as four alternatively spliced isoforms, designated TPIP- $\gamma$ , TPIP-2, TPIP- $\alpha$ , and TPIP- $\beta$ . TPIP- $\beta$ , which lacks a transmembrane domain and contains a truncated CS domain, localizes to cytoplasm and is testis specific. TPIP- $\alpha$  is expressed in testis, brain and stomach and shows a high degree of sequence conservation with PTEN as well as TPTE. The gene encoding TPIP maps to human chromosome 13q12.11.

## REFERENCES

- Walker, S.M., et al. 2001. TPIP: a novel phosphoinositide 3-phosphatase. *Biochem. J.* 360: 277-283.
- Online Mendelian Inheritance in Man, OMIM<sup>™</sup>. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 606791. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Tapparell, C., et al. 2003. The TPTE gene family: cellular expression, subcellular localization and alternative splicing. *Gene* 323: 189-199.
- Deocampo, N.D., et al. 2003. The role of PTEN in the progression and survival of prostate cancer. *Minerva Endocrinol.* 28: 145-153.
- Dunham, A., et al. 2004. The DNA sequence and analysis of human chromosome 13. *Nature* 428: 522-528.
- Clifford, R.J., et al. 2010. Genetic variations at loci involved in the immune response are risk factors for hepatocellular carcinoma. *Hepatology* 52: 2034-2043.
- Rose, J.E., et al. 2010. Personalized smoking cessation: interactions between nicotine dose, dependence and quit-success genotype score. *Mol. Med.* 16: 247-253.

## CHROMOSOMAL LOCATION

Genetic locus: TPTE2 (human) mapping to 13q12.11, TPTE (human) mapping to 21p11.1.

## SOURCE

TPIP (K-15) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of TPIP of human origin.

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

## PRODUCT

Each vial contains 100  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-85186 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

TPIP (K-15) is recommended for detection of TPIP and TPTE of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

TPIP (K-15) is also recommended for detection of TPIP and TPTE in additional species, including canine and avian.

Molecular Weight of TPIP isoforms 1/2/3/4: 61/56/52/38 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker<sup>™</sup> compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz<sup>™</sup> Mounting Medium: sc-24941.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.