SANTA CRUZ BIOTECHNOLOGY, INC.

TPTE (H-120): sc-292365

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The Power to Question

BACKGROUND

TPTE (transmembrane phosphatase with tensin homology), also known as PTEN2 (phosphatase and tensin homolog 2) in mice or CT44 (cancer/testis antigen 44), is a 551 amino acid multi-pass membrane protein belonging to the PTEN-related family that is exclusively expressed in the testis and localizes to the plasma membrane in humans. The gene encoding TPTE is present in multiple copies in the human genome, some of which may be pseudogenes. TPTE contains one C2 tensin-type domain and one phosphatase tensin-type domain but, in humans, it does not exhibit phosphatase activity. However, the mouse ortholog (PTEN2) is a functional 3-phosphoinositide phosphatase that localizes to the Golgi apparatus and plays a possible role in signal transduction. In humans, four isoforms, namely TPTEα, TPTEβ, TPTEγ and TPTEδ, are produced by alternative splicing of this gene.

REFERENCES

1. Forgacs, E., et al. 1998. Mutation analysis of the PTEN/MMAC1 gene in lung cancer. Oncogene 17: 1557-1565.
2. Walker, S.M., et al. 2001. TPIP: a novel phosphoinositide 3-phosphatase. Biochem. J. 360: 277-283.
3. Guipponi, M., et al. 2001. The murine orthologue of the Golgi-localized TPTE protein provides clues to the evolutionary history of the human TPTE gene family. Hum. Genet. 109: 569-575.
4. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 604336. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. Tapparel, C., et al. 2003. The TPTE gene family: cellular expression, subcellular localization and alternative splicing. Gene 323: 189-199.
6. Valiente, M., et al. 2005. Binding of PTEN to specific PDZ domains contributes to PTEN protein stability and phosphorylation by microtubule-associated serine/threonine kinases. J. Biol. Chem. 280: 28936-28943.
7. Mahadevan, D., et al. 2005. Transcript profiling in peripheral T-cell lymphoma, not otherwise specified, and diffuse large B-cell lymphoma identifies distinct tumor profile signatures. Mol. Cancer Ther. 4: 1867-1879.
8. Kawaguchi, K., et al. 2005. Genetic and epigenetic alterations of the PTEN gene in soft tissue sarcomas. Hum. Pathol. 36: 357-363.

CHROMOSOMAL LOCATION

Genetic locus: TPTE (human) mapping to 21p11.1, TPTE2 (human) mapping to 13q12.11; Tpte (mouse) mapping to 8 A2.

SOURCE

TPTE (H-120) is a rabbit polyclonal antibody raised against amino acids 271-385 mapping within an internal region of TPTE of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

TPTE (H-120) is recommended for detection of TPTE of mouse, rat and human origin and TPTE2 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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).

Suitable for use as control antibody for TPTE siRNA (m): sc-63144, TPTE shRNA Plasmid (m): sc-63144-SH and TPTE shRNA (m) Lentiviral Particles: sc-63144-V.

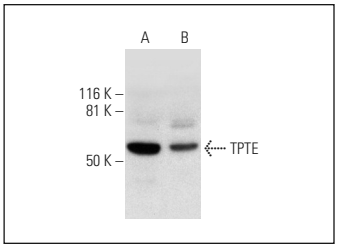
Molecular Weight of TPTE isoforms: 64/62/60/50 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, NTERA-2 cl.D1 whole cell lysate: sc-364181 or Jurkat whole cell lysate: sc-2204.

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™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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™ Mounting Medium: sc-24941.

DATA



TPTE (H-120): sc-292365. Western blot analysis of TPTE expression in Hep G2 (**A**) and NTERA-2 cl.D1 (**B**) whole cell lysates.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.