SANTA CRUZ BIOTECHNOLOGY, INC.

TP1 (B-1): sc-166620

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Telomerase is an RNA-dependent DNA polymerase that catalyzes the addition of telomeric repeat sequences to chromosome ends. In most human somatic cells, telomerase activity is undetectable, and telomeres shorten with successive cell divisions. However, telomerase activity is detectable in immortal cells and in many human tumors. Two candidate mammalian telomerase proteins have been cloned. Human TP1 (for telomerase-associated protein 1), also designated TLP1 in rat (for telomerase protein component 1), is homologous to the *Tetrahymena* p80 telomerase protein and has been shown to interact with mammalian telomerase RNA. Human TRT (for telomerase reverse transcriptase), also designated hEST2 (for ever shorter telomeres), is homologous to the p123 telomerase protein from *Euplotes* and to the yeast Est2 protein. Expression of TRT mRNA has been shown to correlate with telomerase activity in various cell lines.

REFERENCES

1. Counter, C.M., et al. 1992. Telomere shortening associated with chromosome instability is arrested in immortal cells which express telomerase activity. EMBO J. 11: 1921-1929.
2. Kim, N.W., et al. 1994. Specific association of human telomerase activity with immortal cells and cancer. Science 266: 2011-2015.
3. Greider, C.W. 1996. Telomere length regulation. Annu. Rev. Biochem. 65: 337-365.
4. Harrington, L., et al. 1997. A mammalian telomerase-associated protein. Science 275: 973-977.
5. Nakayama, J., et al. 1997. TLP1: a gene encoding a protein component of mammalian telomerase is a novel member of WD repeats family. Cell 88: 875-884.

CHROMOSOMAL LOCATION

Genetic locus: TEP1 (human) mapping to 14q11.2; Tep1 (mouse) mapping to 14 C1.

SOURCE

TP1 (B-1) is a mouse monoclonal antibody raised against amino acids 2328-2627 of TP1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

TP1 (B-1) is available conjugated to agarose (sc-166620 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-166620 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166620 PE), fluorescein (sc-166620 FITC), Alexa Fluor® 488 (sc-166620 AF488), Alexa Fluor® 546 (sc-166620 AF546), Alexa Fluor® 594 (sc-166620 AF594) or Alexa Fluor® 647 (sc-166620 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-166620 AF680) or Alexa Fluor® 790 (sc-166620 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

TP1 (B-1) is recommended for detection of TP1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 TP1 siRNA (h): sc-36703, TP1 siRNA (m): sc-36704, TP1 shRNA Plasmid (h): sc-36703-SH, TP1 shRNA Plasmid (m): sc-36704-SH, TP1 shRNA (h) Lentiviral Particles: sc-36703-V and TP1 shRNA (m) Lentiviral Particles: sc-36704-V.

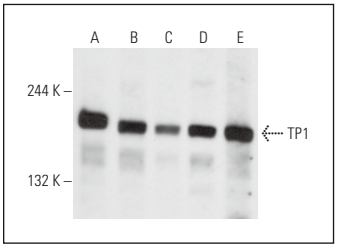
Molecular Weight of TP1 isoforms: 240/230 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, SK-N-SH cell lysate: sc-2410 or LADMAC whole cell lysate: sc-364189.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



TP1 (B-1): sc-166620. Western blot analysis of TP1 expression in K-562 (**A**), SK-N-SH (**B**), P 23 (**C**), LADMAC (**D**) and AT-3 (**E**) 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 for detailed protocols and support products.