

TP1 (H-300): sc-13052

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

- 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.
- Kim, N.W., et al. 1994. Specific association of human telomerase activity with immortal cells and cancer. *Science* 266: 2011-2015.
- Greider, C.W. 1996. Telomere length regulation. *Annu. Rev. Biochem.* 65: 337-365.
- Harrington, L., et al. 1997. A mammalian telomerase-associated protein. *Science* 275: 973-977.
- 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.
- Nakamura, T.M., et al. 1997. Telomerase catalytic subunit homologs from fission yeast and human. *Science* 277: 955-959.

CHROMOSOMAL LOCATION

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

SOURCE

TP1 (H-300) is a rabbit polyclonal antibody raised against amino acids 2328-2627 mapping at the C-terminus of TP1 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.

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.

APPLICATIONS

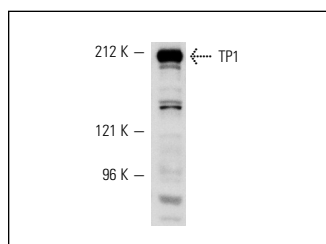
TP1 (H-300) is recommended for detection of TP1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for 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.

DATA



TP1 (H-300): sc-13052. Western blot analysis of TP1 expression in K-562 whole cell lysate.

SELECT PRODUCT CITATIONS

- Ogawa, D., et al. 2006. Activation of peroxisome proliferator-activated receptor γ suppresses telomerase activity in vascular smooth muscle cells. *Circ. Res.* 98: 50-59.
- Sipos, F., et al. 2008. Elevated Insulin-like growth factor 1 receptor, hepatocyte growth factor receptor and telomerase protein expression in mild ulcerative colitis. *Scand. J. Gastroenterol.* 43: 289-298.
- Bhattacharyya, S., et al. 2009. Telomerase associated protein 1, Hsp90 and topoisomerase II α associate directly with the BLM Helicase in immortalized cells using altand modulate its helicase activity using telomeric DNA substrates. *J. Biol. Chem.* 284: 14966-14977.

PROTOCOLS

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



Try **TP1 (B-1): sc-166620**, our highly recommended monoclonal alternative to TP1 (H-300).