SANTA CRUZ BIOTECHNOLOGY, INC.

TERT (D-16): sc-68720

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 TERT (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 TERT 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. Nakamura, T.M., et al. 1997. Telomerase catalytic subunit homologs from fission yeast and human. Science 277: 955-959.
6. 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.
7. Meyerson, M., et al. 1997. hEST2, the putative human telomerase catalytic subunit gene, is upregulated in tumor cells and during immortalization. Cell 90: 785-795.

CHROMOSOMAL LOCATION

Genetic locus: Tert (mouse) mapping to 13 C1.

SOURCE

TERT (D-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of TERT of mouse origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-68720 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

TERT (D-16) is recommended for detection of TERT of mouse and rat 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).

Suitable for use as control antibody for TERT siRNA (m): sc-36642, TERT shRNA Plasmid (m): sc-36642-SH and TERT shRNA (m) Lentiviral Particles: sc-36642-V.

Molecular Weight of TERT: 120 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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 or our catalog for detailed protocols and support products.