

TERT (L-20): sc-7214



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.

CHROMOSOMAL LOCATION

Genetic locus: TERT (human) mapping to 5p15.33.

SOURCE

TERT (L-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of TERT 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.

Blocking peptide available for competition studies, sc-7214 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

TERT (L-20) is recommended for detection of TERT 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), immunohistochemistry (including paraffin-embedded sections) (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 (h): sc-36641, TERT shRNA Plasmid (h): sc-36641-SH and TERT shRNA (h) Lentiviral Particles: sc-36641-V.

Molecular Weight of TERT: 120 kDa.

Positive Controls: Jurkat nuclear extract: sc-2132, SK-BR-3 nuclear extract: sc-2134 or HeLa nuclear extract: sc-2120.

STORAGE

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

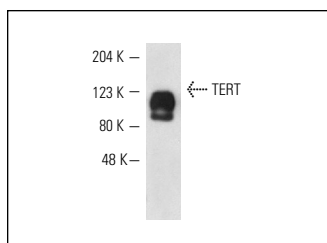
PROTOCOLS

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

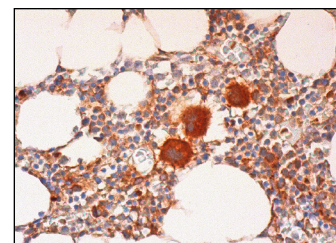
RESEARCH USE

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

DATA



TERT (L-20): sc-7214. Western blot analysis of TERT expression in HeLa nuclear extract.



TERT (L-20): sc-7214. Immunoperoxidase staining of formalin fixed, paraffin-embedded human bone marrow tissue showing cytoplasmic staining of hematopoietic cells.

SELECT PRODUCT CITATIONS

- Ali, A.S., et al. 2000. Detection of hTERT protein by flow cytometry. *Leukemia* 14: 2176-2181.
- Del Bufalo, D., et al. 2005. Involvement of hTERT in apoptosis induced by interference with Bcl-2 expression and function. *Cell Death Differ.* 12: 1429-1438.
- Chang, J.T., et al. 2006. hTERT phosphorylation by PKC is essential for telomerase holoprotein integrity and enzyme activity in head neck cancer cells. *Br. J. Cancer* 94: 870-878.
- Miri-Moghaddam, E., et al. 2009. Downregulation of telomerase activity in human promyelocytic cell line using RNA interference. *Ann. Hematol.* 88: 1169-1176.
- Colitz, C.M., et al. 2009. ER α increases expression and interacts with TERT in cataractous canine lens epithelial cells. *Mol. Vis.* 15: 2259-2267.
- Handa, H., et al. 2010. Flow cytometric detection of human telomerase reverse transcriptase (hTERT) expression in a subpopulation of bone marrow cells. *Leuk. Res.* 34: 177-183.
- Heeg, S., et al. 2011. EGFR overexpression induces activation of telomerase via PI3K/AKT-mediated phosphorylation and transcriptional regulation through Hif1- α in a cellular model of oral-esophageal carcinogenesis. *Cancer Sci.* 102: 351-360.
- Sobhan, P.K., et al. 2012. Immortalized functional endothelial progenitor cell lines from umbilical cord blood for vascular tissue engineering. *Tissue Eng. Part C Methods* 18: 890-902.

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