

Recombinant Human Tert

Cat. No. Tert-550H Lot. No. (See product label)

SPECIFICATION

Product Overview	Telomerase Human Recombinant encoding 174-341 amino acids expressed in E.coli. Telomerase is purified by proprietary chromatographic techniques.
Species	Human
Source	E.coli
ProteinLength	174-341 a.a.
Description	Telomerase is a ribonucleoprotein polymerase that maintains telomere ends by addition of the telomere repeat TTAGGG. The enzyme consists of a protein component with reverse transcriptase activity, encoded by this gene, and an RNA component which serves as a template for the telomere repeat. Telomerase expression plays a role in cellular senescence, as it is normally repressed in postnatal somatic cells resulting in progressive shortening of telomeres. Deregulation of telomerase expression in somatic cells may be involved in oncogenesis. Studies in mouse suggest that telomerase also participates in chromosomal repair, since de novo synthesis of telomere repeats may occur at double-stranded breaks. Alternatively spliced variants encoding different isoforms of telomerase reverse transcriptase have been identified; the full-length sequence of some variants has not been determined. Alternative splicing at this locus is thought to be one mechanism of regulation of telomerase activity.
Physical Appearance	Sterile filtered liquid.

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Formulation	Telomerase protein at 100µg/ml in 50mM Tris-Acetate, pH-7.5, 1mM EDTA and 20% Glycerol.
Stability	Store vial at -20°C to -80°C. When stored at the recommended temperature, this protein is stable for 12 months. Please avoid freeze-thaw cycles.
Applications	1. ELISA 2. Inhibition Assays 3. Western Blotting Characterization
OfficialSymbol	TERT

GENE INFORMATION

Gene Name	TERT telomerase reverse transcriptase [Homo sapiens]
Synonyms	TERT; telomerase reverse transcriptase; TP2; TRT; EST2; TCS1; hTERT; DKCA2; DKCB4; hEST2; PFBMFT1; telomerase catalytic subunit; telomerase-associated protein 2; EC 2.7.7.49
Gene ID	7015
mRNA Refseq	NM_001193376
Protein Refseq	NP_001180305
MIM	187270
UniProt ID	O14746
Chromosome Location	5p15.33

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Pathway	Cell Cycle; Chromosome Maintenance; Extension of Telomeres; HIF-1-alpha transcription factor network
Function	metal ion binding; protein homodimerization activity; telomerase activity; telomeric DNA binding; telomeric RNA binding; telomeric template RNA reverse transcriptase activity; telomeric template RNA reverse transcriptase activity

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