

## TRET Protein, Mouse, Recombinant (His & SUMO)

### General Information

Synonyms: Telomerase catalytic subunit;Telomerase reverse transcriptase;Tert

Protein Construction: 595-928 aa

Species: Mouse

Expression Host: E. coli

Accession: O70372

Molecular Weight: 54.1 kDa (predicted)

AA Sequence:

EVRHHQDTWLAMPICRLRFIPKPNGLRPVNMSSYSMGTRALGRRKQAQHFTQRLKTLFSMLNYERTKHPHLM  
GSSVLGMNDIYRTWRAFVLRVLRALDQTPRMYFVKADVTGAYDAIPQGKLEVVANMIRHSESTYCIQYAVV  
RRDSQGQVHKSFRQVTTLSLQPYMGQFLKHLQSDASALRNSVVIEQSISMNESSSLFDFLHFLRHSVV  
KIGDRCYTQCQGIPQGSSSLTLLCSLFCGDMENKLF AEVQRDGLLLRFVDDFLLVTPHLDQAKTFLSTLVHGVP  
EYGCMINLQKTVVNFVPEPGLGGAAPYQLPAHCLFPWCGLLL

### QC Testing

Biological Activity: Activity has not been tested. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.

Purity: > 90% as determined by SDS-PAGE.

Endotoxin: < 1.0 EU/μg of the protein as determined by the LAL method.

Formulation: Tris-based buffer, 50% glycerol

### Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

*Actual storage temperature shall be subject to the COA.*

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

### Protein Background

Telomerase is a ribonucleoprotein enzyme essential for the replication of chromosome termini in most eukaryotes. Active in progenitor and cancer cells. Inactive, or very low activity, in normal somatic cells. Catalytic component of the telomerase holoenzyme complex whose main activity is the elongation of telomeres by acting as a reverse

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transcriptase that adds simple sequence repeats to chromosome ends by copying a template sequence within the RNA component of the enzyme. Catalyzes the RNA-dependent extension of 3'-chromosomal termini with the 6-nucleotide telomeric repeat unit, 5'-TTAGGG-3'. The catalytic cycle involves primer binding, primer extension and release of product once the template boundary has been reached or nascent product translocation followed by further extension. More active on substrates containing 2 or 3 telomeric repeats. Telomerase activity is regulated by a number of factors including telomerase complex-associated proteins, chaperones and polypeptide modifiers. Modulates Wnt signaling. Plays important roles in aging and antiapoptosis.

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