



Recombinant Human Telomerase reverse transcriptase (TERT), partial

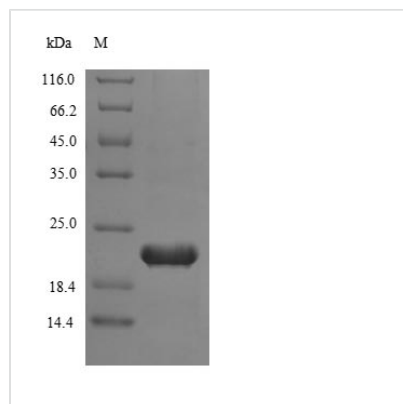
Product Code	CSB-EP023391HU
Relevance	Telomerase is a ribonucleoprotein enzyme essential for the replication of chromosome termini in most eukaryotes. Active in progenitor and cancer cells. Inactive, or very low activity, in normal somatic cells. Catalytic component of the telomerase holoenzyme complex whose main activity is the elongation of telomeres by acting as a reverse 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.
Abbreviation	Recombinant Human TERT protein, partial
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.
Uniprot No.	O14746
Product Type	Recombinant Protein
Immunogen Species	Homo sapiens (Human)
Purity	Greater than 85% as determined by SDS-PAGE.
Sequence	EATSLEGALSGTRHSHPSVGRQHHAGPPSTSRPPRPWDTPCPPVYAETKHFL YSSGDKEQLRPSFLLSSLRPSLTGARRLVETIFLGSRPWMPGTPRRLPRLPQR YWQMRPLFLELLGNHAQCPYGVLLKTHCPLRAAVTPAAGVCAREKPKQGSVA
Research Area	others
Source	E.coli
Target Names	TERT
Protein Names	HEST2 Telomerase catalytic subunit Telomerase-associated protein 2
Expression Region	281-436aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 6xHis-tagged



Mol. Weight 22.7kDa

Protein Length Partial

Image



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.

Description

The recombinant human telomerase reverse transcriptase (TERT) is generated by expressing the gene fragment corresponding to amino acids 281-436 of the human TERT in E.coli. This recombinant TERT protein is fused with a 6xHis-tag at the N-terminus. The 6xHis-tag allows for metal affinity chromatography-mediated purification of the fusion protein. The purity of this protein reaches up to 85% measured by SDS-PAGE. It migrated to the molecular weight band of 20-23 kDa. This protein is in stock now. The target protein TERT is a catalytic subunit of the enzyme telomerase, which together with the TERC comprises the most important unit of the telomerase complex. Telomerase is the enzyme required for the addition of telomeric repeats to the ends of linear chromosomes.

Reconstitution

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL. We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.

Shelf Life

The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.