APC241Hu01 100μg
Active Telomerase Reverse Transcriptase (TERT)
Organism Species: *Homo sapiens* (Human)
Instruction manual

FOR RESEARCH USE ONLY
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

13th Edition (Revised in Aug, 2023)

[PROPERTIES]

Source: Prokaryotic expression.
Host: *E. coli*
Residues: Arg787~Arg1084
Tags: N-terminal His and GST Tag
Purity: >90%
Endotoxin Level: <1.0EU per 1μg (determined by the LAL method).
Buffer Formulation: PBS, pH7.4, containing 0.01% SKL, 5%Trehalose .
Original Concentration: 200μg/mL
Applications: Cell culture; Activity Assays.
(May be suitable for use in other assays to be determined by the end user.)
Predicted isoelectric point: 8.8
Predicted Molecular Mass: 63.4kDa
Accurate Molecular Mass: 65kDa as determined by SDS-PAGE reducing conditions.

[USAGE]

Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.

[STORAGE AND STABILITY]

Storage: Avoid repeated freeze/thaw cycles.
Store at 2-8ºC for one month.
Aliquot and store at -80ºC for 12 months.

Stability Test: The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37ºC for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.

[SEQUENCE]

RDAV VIEQSSSLNE
ASSGLFDVFL RFMCHHAVRI RGKSYVQCQG IPQGSILSTL LCSLCYGDME
NKLFAGIRRD GLLLRLVDDF LLVTPHLTHA KTFLRTLVRG VPEYGCVVNL
RKTVVNFPVE DEALGGTAFV QMPAHGLFPW CGLLLDTRTL EVQSDYSSYA
RTSIRASLTF NRGFKAGRNM RRKLFGVLRL KCHSLFLDLQ VNSLQTVCTN
IYKILLLQAY RFHACVLQLP FHQQVWKNPT FFLRVISDTA SLCYSILKAK
NAGMSLGAKG AAGPLPSEAV QWLCHQAFLL KLTR

[ACTIVITY]

Telomerase reverse transcriptase (TERT) is a subunit of the enzyme complex telomerase, which adds nucleotides to the ends of telomeres as they become shortened during cell division .Telomerase complex plays a key role in cancer formation by telomere dependent or independent mechanisms. According to statistics, human telomerase reverse transcriptase (h-TERT) is overexpressed in more than 85% of tumors with diverse histologies, with little expression in normal tissues. Expression of h-TERT correlates with activity of telomerase, which is required for the capacity for limitless replication, a hallmark of cancer. The X-Ray Repair Cross Complementing 6 (XRCC6) is high affinity receptor for TERT, thus a functional binding ELISA assay was conducted to detect the interaction of recombinant human TERT and recombinant rat XRCC6. Briefly, TERT was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 μl were then transferred to XRCC6-coated microtiter wells and incubated for 1h at 37℃. Wells were washed with PBST and incubated for 1h with anti-TERT pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody for 1h at 37℃, wells were

aspirated and washed 5 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37℃. Finally, add 50 μL stop solution to the wells and read at 450/630 nm immediately. The binding activity of recombinant TERT and recombinant rat XRCC6 was shown in Figure 1, the EC50 for this effect is 0.009 ug/mL.

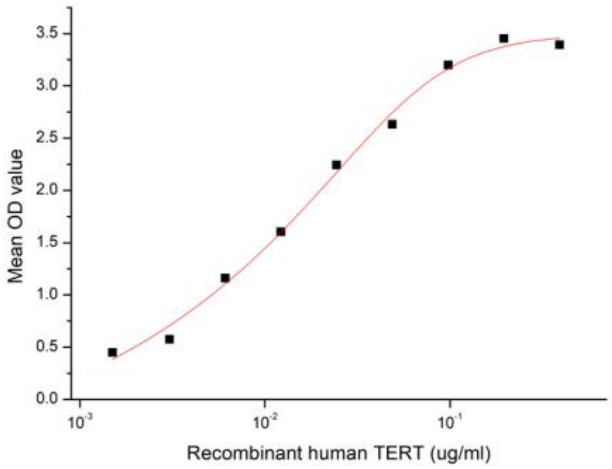

Figure 1. The binding activity of recombinant human TERT and recombinant rat XRCC6

[IDENTIFICATION]

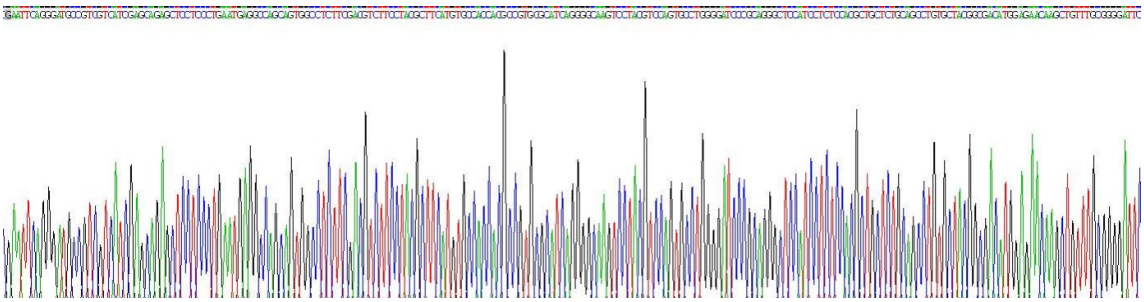

Figure 2. Gene Sequencing (extract)

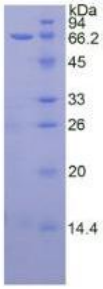

Figure 3. SDS-PAGE

Sample: Active recombinant TERT, Human

[IMPORTANT NOTE]

The kit is designed for research use only, we will not be responsible for any issue if the kit was used in clinical diagnostic or any other procedures.