



# TERT Rabbit mAb

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| <b>Catalog No</b>                  | YP-rAb-17248                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Isotype</b>                     | IgG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Reactivity</b>                  | Human,Mouse                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Applications</b>                | WB,IHC,IF,ELISA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Gene Name</b>                   | TERT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Protein Name</b>                | Telomerase reverse transcriptase                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Purification Process</b>        | Protein A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Specificity</b>                 | Endogenous                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Formulation</b>                 | PBS, 50% glycerol, 0.05% Proclin 300, 0.05%BSA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Source</b>                      | Monoclonal, Rabbit,IgG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Dilution</b>                    | IHC 1:200-1:1000; WB 1:2000-1:10000; IF 1:200-1:1000; ELISA 1:5000-1:20000;<br>Note: For IHC, we suggest antigen retrieval with TE buffer pH 9.0                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Concentration</b>               | 0.5 mg/ml                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Purity</b>                      | ≥90%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Storage Stability</b>           | -15 ° C to -25 ° C/1 year(Do not lower than -25 ° C)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Synonyms</b>                    | TERT;Telomerase reverse transcriptase;TERT ; EST2 ; TCS1 ; TRT ;<br>Telomerase reverse transcriptase ; HEST2 ; Telomerase catalytic subunit ;<br>Telomerase-associated protein 2 ; TP2                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Observed Band</b>               | 127kD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Calculated Molecular Weight</b> | 127kD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Cell Pathway</b>                | Nucleus, nucleolus . Nucleus, nucleoplasm. Nucleus. Chromosome, telomere.<br>Cytoplasm. Nucleus, PML body. Shuttling between nuclear and cytoplasm depends on cell cycle, phosphorylation states, transformation and DNA damage .<br>Diffuse localization in the nucleoplasm. Enriched in nucleoli of certain cell types .<br>Translocated to the cytoplasm via nuclear pores in a CRM1/RAN-dependent manner involving oxidative stress-mediated phosphorylation at Tyr-707 .<br>Dephosphorylation at this site by SHP2 retains TERT in the nucleus. Translocated to the nucleus by phosphorylation by AKT. |
| <b>Tissue Specificity</b>          | Expressed at a high level in thymocyte subpopulations, at an intermediate level in tonsil T-lymphocytes, and at a low to undetectable level in peripheral blood T-lymphocytes.                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Function</b>                    | Catalytic activity:Deoxynucleoside triphosphate + DNA(n) = diphosphate + DNA(n+1).,Disease:Activation of telomerase has been implicated in cell immortalization and cancer cell pathogenesis.,Disease:Defects in TERT are a cause of dyskeratosis congenita autosomal dominant (ADCKC) [MIM:127550]; also known as dyskeratosis congenita Scoggins type. ADCKC is a rare,                                                                                                                                                                                                                                   |



progressive bone marrow failure syndrome characterized by the triad of reticulated skin hyperpigmentation, nail dystrophy, and mucosal leukoplakia. Early mortality is often associated with bone marrow failure, infections, fatal pulmonary complications, or malignancy. Disease: Defects in TERT are associated with susceptibility to aplastic anemia (AA) [MIM:609135]. AA is a rare disease in which the reduction of the circulating blood cells results from damage to the stem cell pool in bone marrow. In most patients, the stem cell lesion is caused by an autoimmune attack. T-lymphocytes, activated by an endogenous or exogenous, and most often unknown antigenic stimulus, secrete cytokines, including IFN-gamma, which would in turn be able to suppress hematopoiesis. Disease: Defects in TERT increases susceptibility to idiopathic pulmonary fibrosis [MIM:178500]. Idiopathic pulmonary fibrosis is an adult-onset, lethal, scarring lung disease of unknown etiology. Its clinical features are shortness of breath, radiographically evident diffuse pulmonary infiltrates, and varying degrees in inflammation, fibrosis, or both on biopsy. It is rapidly progressive and characterized by sequential acute lung injury with subsequent scarring and endstage lung disease. Disease: Genetic variations in TERT are associated with coronary artery disease (CAD). Function: Telomerase is a ribonucleoprotein enzyme essential for the replication of chromosome termini in most eukaryotes. It elongates telomeres. It is a reverse transcriptase that adds simple sequence repeats to chromosome ends by copying a template sequence within the RNA component of the enzyme. similarity: Belongs to the reverse transcriptase family. Telomerase subfamily. similarity: Contains 1 reverse transcriptase domain. subunit: Catalytic subunit of the telomerase holoenzyme complex at least composed of TERT, DKC1, WDR79/TCAB1, NOP10, NHP2, GAR1, TEP1, EST1A, POT1 and a telomerase RNA template component (TERC). Interacts with PINX1 and MCRS1.

## Background

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 sp

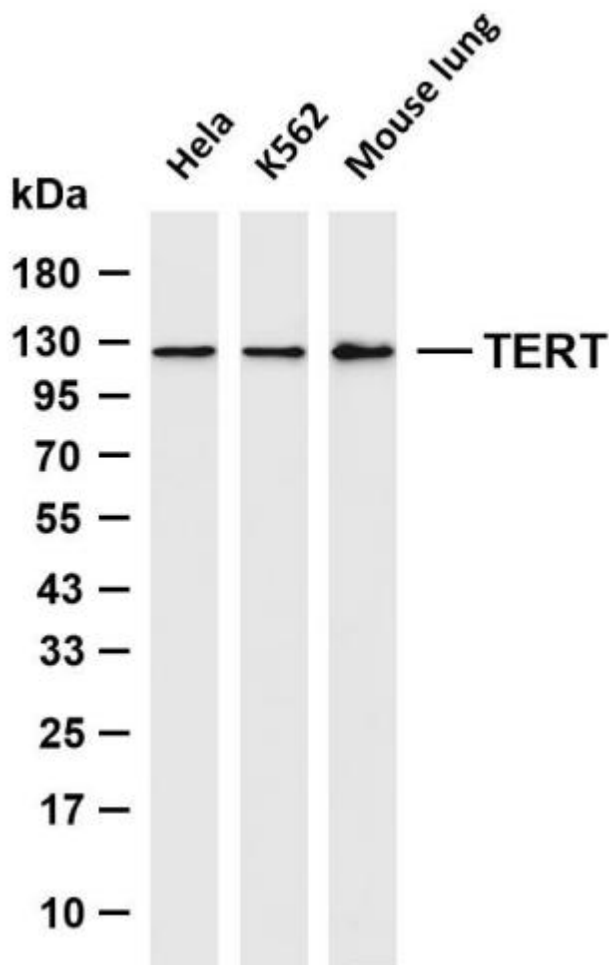
## matters needing attention

Avoid repeated freezing and thawing!

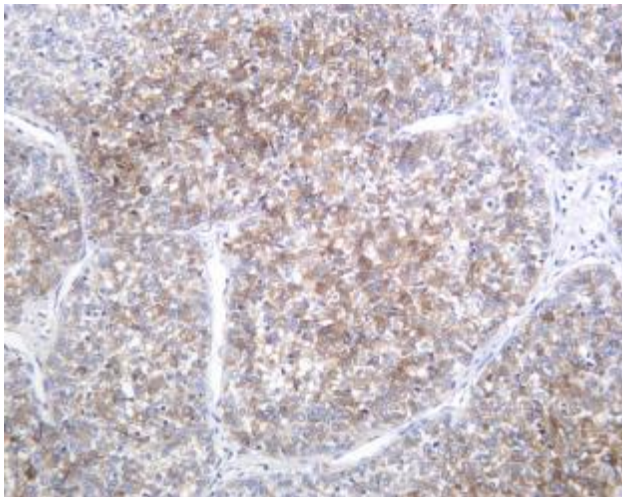
## Usage suggestions

This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.





Various whole cell lysates were separated by 4-20% SDS-PAGE, and the membrane was blotted with anti-TERT antibody. The HRP-conjugated Goat anti-Rabbit IgG (H + L) antibody was used to detect the antibody. Lane 1: HeLa Lane 2: K562 Lane 3: Mouse lung Predicted band size: 127kDa Observed band size: 127kDa



Human hepatocellular carcinoma was stained with anti-TERT Rabbit antibody

