

# Polyclonal Antibody to Telomerase Reverse Transcriptase (TERT)

Telomerase Reverse Transcriptase  
Catalog # AP74675

## Product Information

|                   |                        |
|-------------------|------------------------|
| Application       | WB                     |
| Primary Accession | <a href="#">O70372</a> |
| Reactivity        | Mouse                  |
| Host              | Rabbit                 |
| Clonality         | Polyclonal             |
| Calculated MW     | 127978                 |

## Additional Information

|                    |                                                                                                                                                                                                                   |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Gene ID            | 21752                                                                                                                                                                                                             |
| Other Names        | EST2; TCS1; TP2; TRT; hEST2; Telomerase catalytic subunit; Telomerase-associated protein 2                                                                                                                        |
| Target/Specificity | Mus musculus (Mouse)                                                                                                                                                                                              |
| Dilution           | WB~~Western blotting: 0.5-2 $\mu$ g/mL;1:340-1360<br>Immunohistochemistry: 5-20 $\mu$ g/mL;1:34-136<br>Immunocytochemistry: 5-20 $\mu$ g/mL;1:34-136<br>Optimal working dilutions must be determined by end user. |
| Format             | PBS, pH7.4, containing 0.02% NaN <sub>3</sub> , 50% glycerol.                                                                                                                                                     |
| Storage            | Store at -20 °C.Stable for 12 months from date of receipt                                                                                                                                                         |

## Protein Information

|          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Name     | Tert                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Function | 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 (By similarity).

#### Cellular Location

Nucleus, nucleolus {ECO:0000250|UniProtKB:O14746}. Nucleus, nucleoplasm Nucleus. Chromosome, telomere. Cytoplasm. Nucleus, PML body. Note=Shuttling between nuclear and cytoplasm depends on cell cycle, phosphorylation states, transformation and DNA damage. Diffuse localization in the nucleoplasm. Enriched in nucleoli of certain cell types. Translocated to the cytoplasm via nuclear pores in a CRM1/RAN-dependent manner involving oxidative stress-mediated phosphorylation at Tyr-697. Dephosphorylation at this site by SHP2 retains TERT in the nucleus. Translocated to the nucleus by phosphorylation by AKT (By similarity).

#### Tissue Location

High activity in intestine, liver and testis, moderate in lung, very low in muscle, heart and brain

## Images

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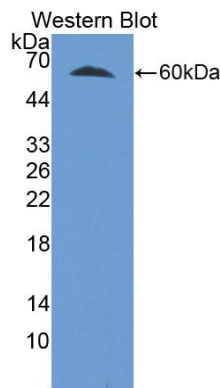


Figure. Western Blot; Sample: Recombinant TERT, Mouse.

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