

**TERT Antibody**  
**Rabbit Polyclonal Antibody**  
**Catalog # ABV11331****Specification**

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**TERT Antibody - Product Information**

Application	WB, IF, IHC
Primary Accession	<a href="#">O14746</a>
Other Accession	<a href="#">EAX08165.1</a>
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG

**TERT Antibody - Additional Information****Gene ID** 7015

Positive Control	Western blot: Jurkat cell line and uterus tissue lysate, IF: HeLa cells, IHC: Human lymph tissue, FC: Jurkat cells. WB: 1:100 - 1:250.
Application & Usage	

**Other Names**

TERT; EST2; TCS1; TRT; Telomerase reverse transcriptase; HEST2; Telomerase catalytic subunit; Telomerase-associated protein 2

**Target/Specificity**

TERT

**Antibody Form**

Liquid

**Appearance**

Colorless liquid

**Formulation**

This antibody is purified through a protein A column, followed by peptide affinity purification.

**Handling**

The antibody solution should be gently mixed before use.

**Reconstitution & Storage**

-20 °C

**Background Descriptions****Precautions**

TERT Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

## **TERT Antibody - Protein Information**

**Name** TERT

**Synonyms** EST2, TCS1, TRT

### **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.

### **Cellular Location**

Nucleus, nucleolus. 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-707. Dephosphorylation at this site by SHP2 retains TERT in the nucleus. Translocated to the nucleus by phosphorylation by AKT

### **Tissue Location**

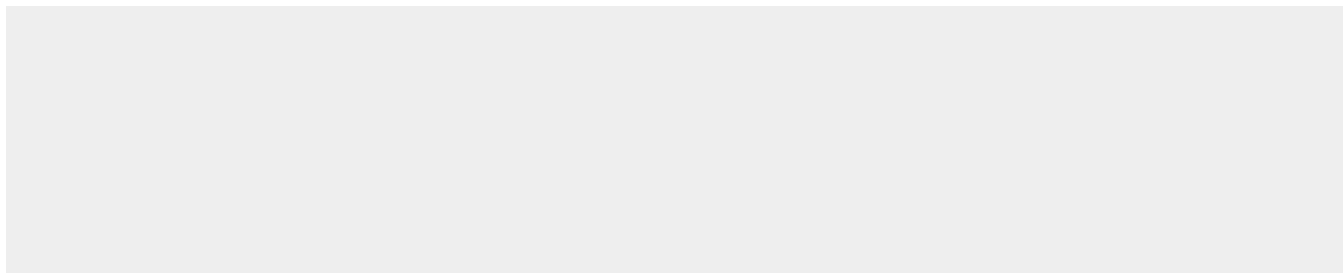
Expressed at a high level in thymocyte subpopulations, at an intermediate level in tonsil T-lymphocytes, and at a low to undetectable level in peripheral blood T-lymphocytes

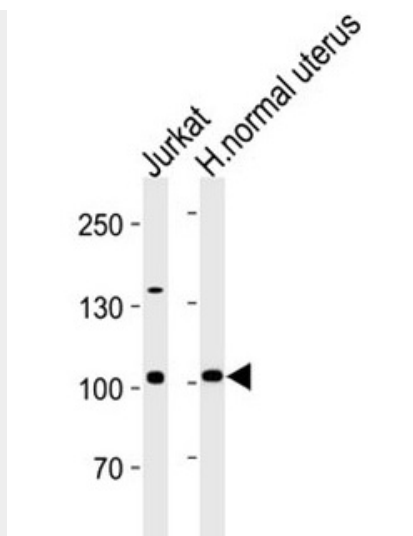
## **TERT Antibody - Protocols**

Provided below are standard protocols that you may find useful for product applications.

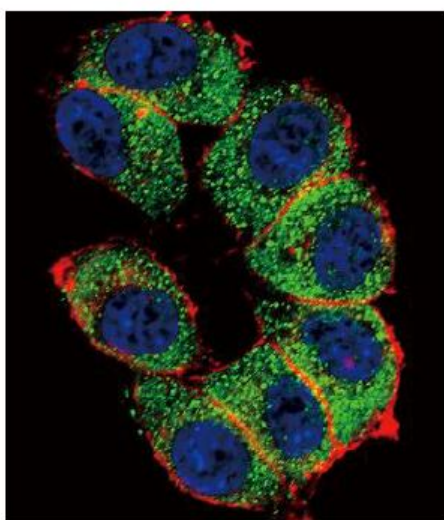
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

## **TERT Antibody - Images**

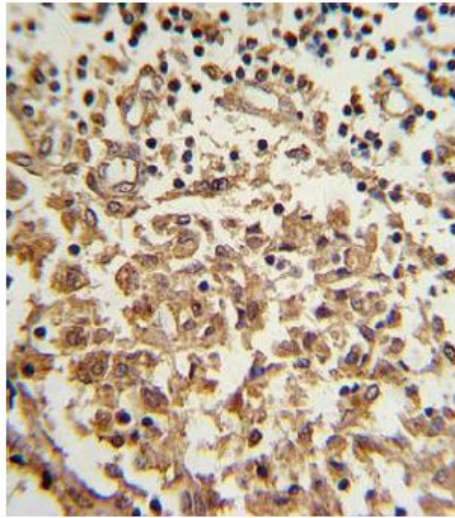




TERT Antibody western blot analysis in Jurkat cell line and human normal uterus tissue lysates (35 µg/lane). This demonstrates the TERT antibody detected the TERT protein (arrow).



Confocal IF analysis of TERT Antibody with HeLa cell followed by Alexa Fluor 488-conjugated goat anti-rabbit IgG (green). Actin filaments have been labeled with Alexa Fluor 555 phalloidin (red). DAPI was used to stain the cell nuclear (blue).



Formalin-fixed and paraffin-embedded human lymph with TERT Antibody which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry.

#### **TERT Antibody - Background**

Telomerase is an RNA-dependent DNA polymerase that catalyzes the addition of telomeric repeat sequences to chromosome ends. In most human somatic cells, telomerase activity is undetectable, and telomeres shorten with successive cell divisions. However, telomerase activity is detectable in immortal cells and in many human tumors. Two candidate mammalian telomerase proteins have been cloned. Human TP1 (for telomerase-associated protein 1), also designated TLP1 in rat (for telomerase protein component 1), is homologous to the Tetrahymena p80 telomerase protein and has been shown to interact with mammalian telomerase RNA. Human TERT (for telomerase reverse transcriptase), also designated hEST2 (for ever shorter telomeres), is homologous to the p123 telomerase protein from Euplotes and to the yeast Est2 protein. Expression of TERT mRNA has been shown to correlate with telomerase activity in various cell lines.