

TERT Antibody (S1125)
Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP1410d**Specification**

TERT Antibody (S1125) - Product Information

Application	WB, IF, FC, IHC-P,E
Primary Accession	O14746
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Antigen Region	1104-1132

TERT Antibody (S1125) - Additional Information**Gene ID** 7015**Other Names**

Telomerase reverse transcriptase, HEST2, Telomerase catalytic subunit, Telomerase-associated protein 2, TP2, TERT, EST2, TCS1, TRT

Target/Specificity

This TERT antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 1104-1132 amino acids from human TERT.

Dilution

WB~~1:2000
IF~~1:10~50
FC~~1:25
IHC-P~~1:25
E~~Use at an assay dependent concentration.

Format

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

Storage

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

TERT Antibody (S1125) is for research use only and not for use in diagnostic or therapeutic procedures.

TERT Antibody (S1125) - 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

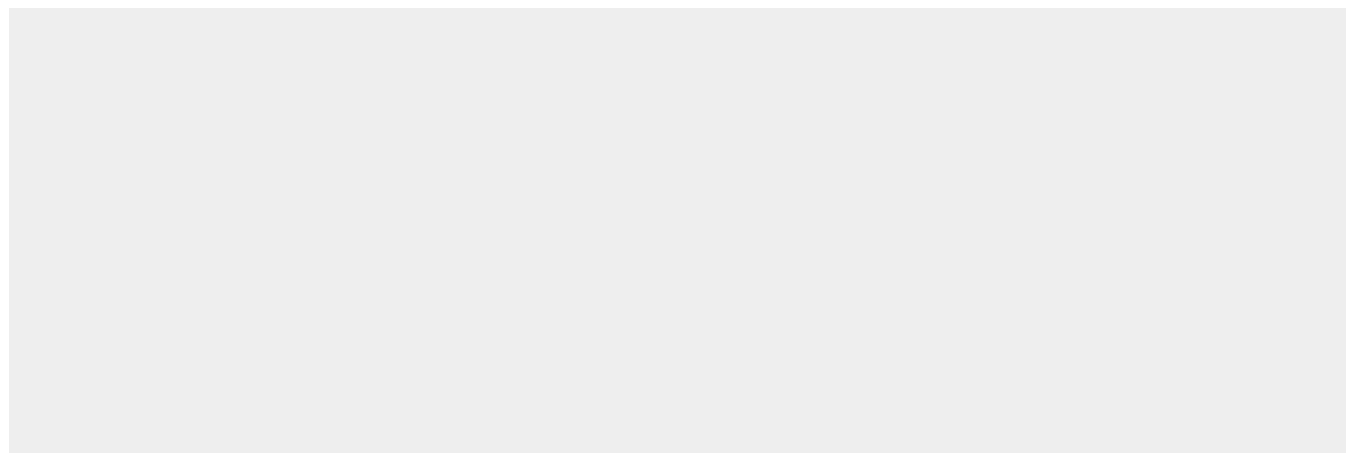
Tissue Location

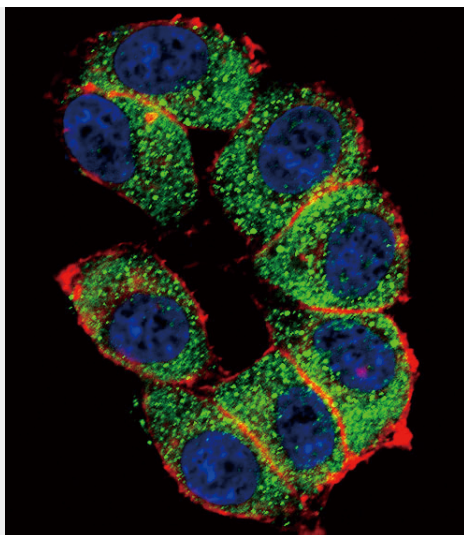
Expressed at a high level in thymocyte subpopulations, at an intermediate level in tonsil T-lymphocytes, and at a low to undetectable level in peripheral blood T-lymphocytes

TERT Antibody (S1125) - Protocols

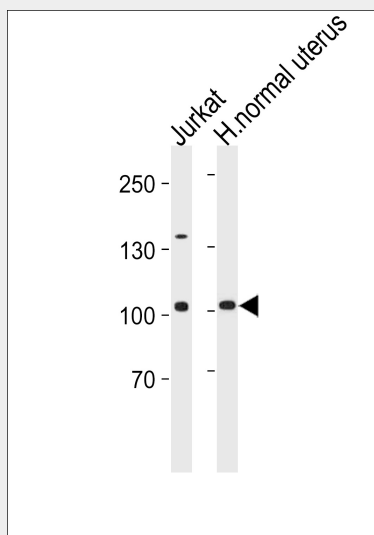
Provided below are standard protocols that you may find useful for product applications.

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

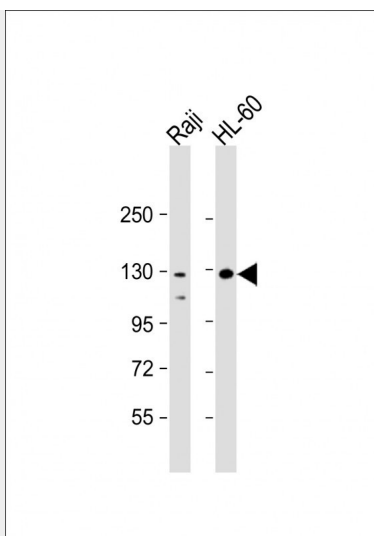
TERT Antibody (S1125) - Images



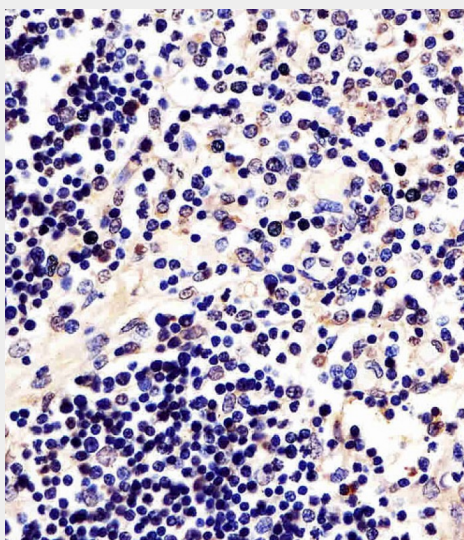
Confocal immunofluorescent analysis of TERT Antibody (S1125)(Cat#AP1410d) with HeLa cell followed by Alexa Fluor 488-conjugated goat anti-rabbit IgG (green). Actin filaments have been labeled with Alexa Fluor 555 phalloidin (red). DAPI was used to stain the cell nuclear (blue).



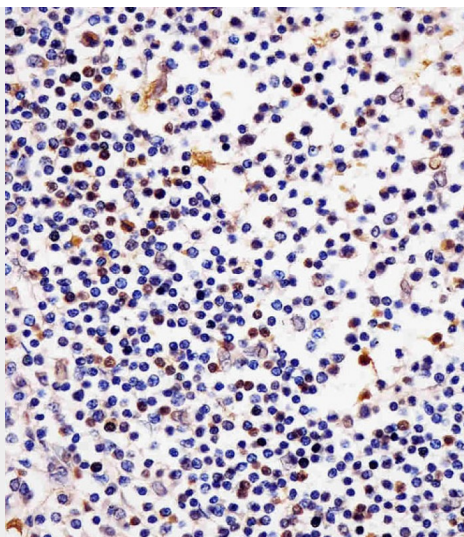
TERT Antibody (pS1125) (Cat. #AP1410d) western blot analysis in Jurkat cell line and human normal uterus tissue lysates (35ug/lane). This demonstrates the TERT antibody detected the TERT protein (arrow).



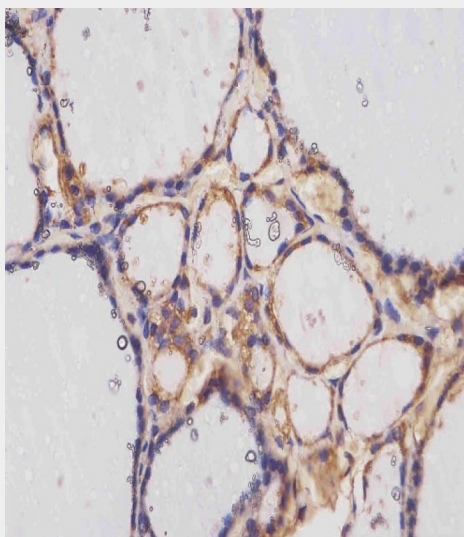
All lanes : Anti-TERT Antibody (S1125) at 1:2000 dilution Lane 1: Raji whole cell lysate Lane 2: HL-60 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 127 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



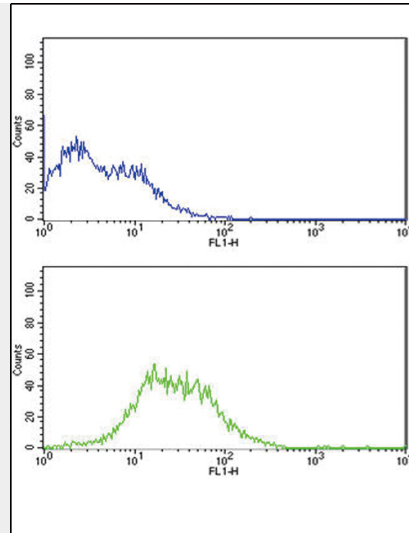
AP1410d staining TERT in human thymus tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde and blocked with 3% BSA for 0.5 hour at room temperature; antigen retrieval was by heat mediation with a citrate buffer (pH6). Samples were incubated with primary antibody (1/25) for 1 hours at 37°C. A undiluted biotinylated goat polyvalent antibody was used as the secondary antibody.



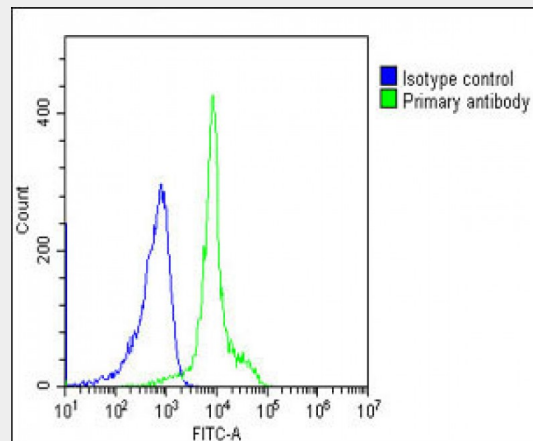
AP1410d staining TERT in human tonsil tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde and blocked with 3% BSA for 0.5 hour at room temperature; antigen retrieval was by heat mediation with a citrate buffer (pH6). Samples were incubated with primary antibody (1/25) for 1 hour at 37°C. A undiluted biotinylated goat polyvalent antibody was used as the secondary antibody.



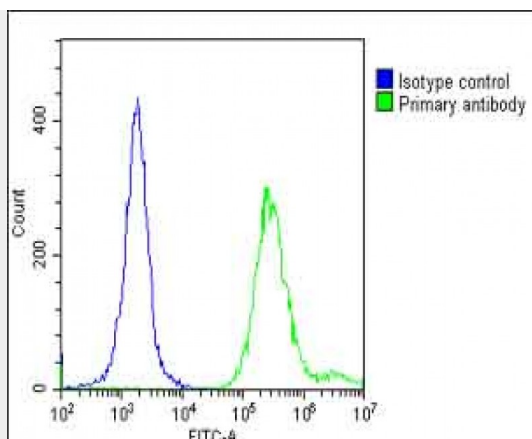
AP1410d staining TERT in human thyroid tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde and blocked with 3% BSA for 0.5 hour at room temperature; antigen retrieval was by heat mediation with a citrate buffer (pH6). Samples were incubated with primary antibody (1/25) for 1 hour at 37°C. A undiluted biotinylated goat polyvalent antibody was used as the secondary antibody.



TERT Antibody (S1125) (Cat. #AP1410d) flow cytometric analysis of Jurkat cells (bottom histogram) compared to a negative control cell (top histogram). FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.



Overlay histogram showing HL-60 cells stained with AP1410d (green line). The cells were fixed with 2% paraformaldehyde (10 min) and then permeabilized with 90% methanol for 10 min. The cells were then incubated in 2% bovine serum albumin to block non-specific protein-protein interactions followed by the antibody (AP1410d, 1:25 dilution) for 60 min at 37°C. The secondary antibody used was Goat-Anti-Rabbit IgG, DyLight® 488 Conjugated Highly Cross-Adsorbed (OH191631) at 1/200 dilution for 40 min at 37°C. Isotype control antibody (blue line) was rabbit IgG1 (1 µg/1x10⁶ cells) used under the same conditions. Acquisition of >10,000 events was performed.



Overlay histogram showing HeLa cells stained with AP1410d (green line). The cells were fixed with 2% paraformaldehyde (10 min) and then permeabilized with 90% methanol for 10 min. The cells were then incubated in 2% bovine serum albumin to block non-specific protein-protein interactions followed by the antibody (AP1410d, 1:25 dilution) for 60 min at 37°C. The secondary antibody used was Goat-Anti-Rabbit IgG, DyLight® 488 Conjugated Highly Cross-Adsorbed (1583138) at 1/200 dilution for 40 min at 37°C. Isotype control antibody (blue line) was rabbit IgG1 (1 µg/1x10⁶ cells) used under the same conditions. Acquisition of >10,000 events was performed.

TERT Antibody (S1125) - 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.

TERT Antibody (S1125) - References

Sekaric, P., J. Virol. 82 (1), 71-76 (2008) Okawa, T., Genes Dev. 21 (21), 2788-2803 (2007)

TERT Antibody (S1125) - Citations

- [RIF1 promotes human epithelial ovarian cancer growth and progression via activating human telomerase reverse transcriptase expression.](#)
- [The competing endogenous RNA network of CYP4Z1 and pseudogene CYP4Z2P exerts an anti-apoptotic function in breast cancer.](#)
- [A novel method for banking stem cells from human exfoliated deciduous teeth: lentiviral TERT immortalization and phenotypical analysis.](#)
- [Characterization of Three-Dimensional Retinal Tissue Derived from Human Embryonic Stem Cells in Adherent Monolayer Cultures.](#)