


# Anti-Telomerase reverse transcriptase antibody [Y182] ab32020

 **RabMAb**

★★★★★ **9 Abreviews** **101 References** **4 图像**

### 概述

产品名称	Anti-Telomerase reverse transcriptase抗体[Y182]
描述	兔单克隆抗体[Y182] to Telomerase reverse transcriptase
宿主	Rabbit
经测试应用	<b>适用于:</b> WB, IP <b>不适用于:</b> ICC/IF or IHC-P
种属反应性	<b>与反应:</b> Human <b>预测可用于:</b> Cow 
免疫原	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
阳性对照	WB: HeLa, HEK-293, Jurkat, SK-BR-3, HL60, MCF7, PC-3 and K-562 cell lysates. IP: HeLa whole cell lysate.
常规说明	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> <li>- High batch-to-batch consistency and reproducibility</li> <li>- Improved sensitivity and specificity</li> <li>- Long-term security of supply</li> <li>- Animal-free production</li> </ul> <p>For more information <a href="#">see here</a>.</p> <p>Our RabMAb<sup>®</sup> technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to <a href="#">RabMAb<sup>®</sup> patents</a>.</p> <p>Mouse: We have preliminary internal testing data to indicate this antibody may not react with this species. Please contact us for more information.</p>

### 性能

形式	Liquid
存放说明	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
存储溶液	pH: 7.20 Preservative: 0.01% Sodium azide Constituents: PBS, 0.05% BSA, 40% Glycerol
纯度	Protein A purified

纯化说明	Cells supernatant
克隆	单克隆
克隆编号	Y182
同种型	IgG

## The Abpromise guarantee

“应用说明”部分下显示的仅为推荐的起始稀释度；实际最佳的稀释度/浓度应由使用者检定。

应用说明 Is unsuitable for ICC/IF or IHC-P.

## 靶标

功能	<p>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.</p>
组织特异性	<p>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.</p>
疾病相关	<p>Note=Activation of telomerase has been implicated in cell immortalization and cancer cell pathogenesis.</p> <p>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.</p> <p>Note=Genetic variations in TERT are associated with coronary artery disease (CAD). Defects in TERT are a cause of dyskeratosis congenita autosomal dominant (ADCK) [MIM:127550]; also known as dyskeratosis congenita Scoggins type. ADCK 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</p>

with bone marrow failure, infections, fatal pulmonary complications, or malignancy. Defects in TERT are a cause of susceptibility to pulmonary fibrosis idiopathic (IPF) [MIM:178500]. Pulmonary fibrosis is a lung disease characterized by shortness of breath, radiographically evident diffuse pulmonary infiltrates, and varying degrees of inflammation and fibrosis on biopsy. It results in acute lung injury with subsequent scarring and endstage lung disease.

#### 序列相似性

Belongs to the reverse transcriptase family. Telomerase subfamily.  
Contains 1 reverse transcriptase domain.

#### 结构域

The primer grip sequence in the RT domain is required for telomerase activity and for stable association with short telomeric primers.  
The RNA-interacting domain 1 (RD1)/N-terminal extension (NTE) is required for interaction with the pseudoknot-template domain of each of TERC dimers. It contains anchor sites that bind primer nucleotides upstream of the RNA-DNA hybrid and is thus an essential determinant of repeat addition processivity.  
The RNA-interacting domain 2 (RD2) is essential for both interaction with the CR4-CR5 domain of TERC and for DNA sythesis.

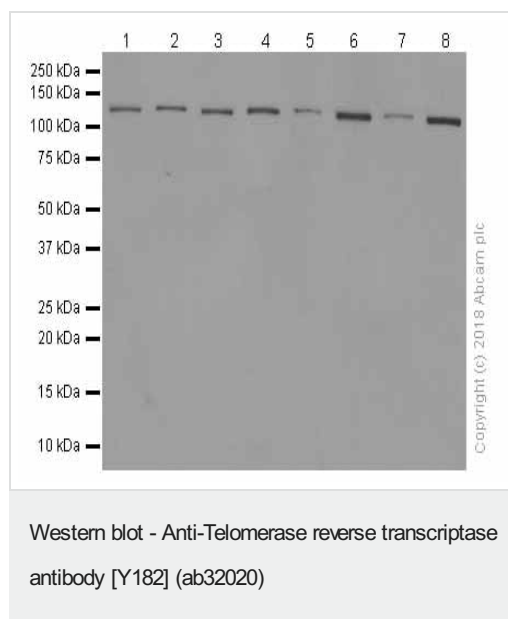
#### 翻译后修饰

Ubiquitinated, leading to proteasomal degradation.  
Phosphorylation at Tyr-707 under oxidative stress leads to translocation of TERT to the cytoplasm and reduces its antiapoptotic activity. Dephosphorylated by SHP2/PTPN11 leading to nuclear retention. Phosphorylation by the AKT pathway promotes nuclear location.

#### 细胞定位

Nucleus > nucleolus. Nucleus > nucleoplasm. Nucleus. Chromosome > telomere. Cytoplasm. Nucleus > PML body. 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.

#### 图片



**All lanes :** Anti-Telomerase reverse transcriptase antibody [Y182] (ab32020) at 1/1000 dilution (Purified)

**Lane 1 :** HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysates

**Lane 2 :** HEK-293 (Human embryonic kidney epithelial cell) whole cell lysates

**Lane 3 :** Jurkat (Human T cell leukemia T lymphocyte) whole cell lysates

**Lane 4 :** SK-BR-3 (Human breast adenocarcinoma epithelial cell) whole cell lysates

**Lane 5 :** HL-60 (Human acute promyelocytic leukemia promyeloblast) whole cell lysates

**Lane 6 :** MCF7 (Human breast adenocarcinoma epithelial cell) whole cell lysates

**Lane 7 :** PC-3 (Human prostate adenocarcinoma epithelial cell) whole cell lysates

**Lane 8 :** K-562 (Human chronic myelogenous leukemia lymphoblast) whole cell lysates

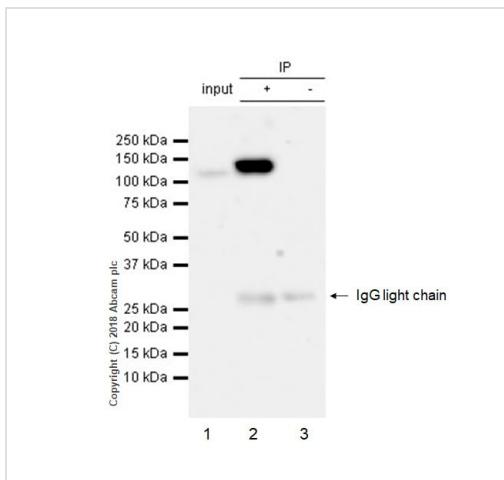
Lysates/proteins at 20 µg per lane.

### Secondary

**All lanes :** Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/20000 dilution

**Predicted band size:** 127 kDa

**Observed band size:** 127 kDa



Immunoprecipitation - Anti-Telomerase reverse transcriptase antibody [Y182] (ab32020)

ab32020 (purified) at 1:100 dilution (2µg) immunoprecipitating

Telomerase reverse transcriptase in HeLa whole cell lysate.

Lane 1 (input): HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysate 10µg

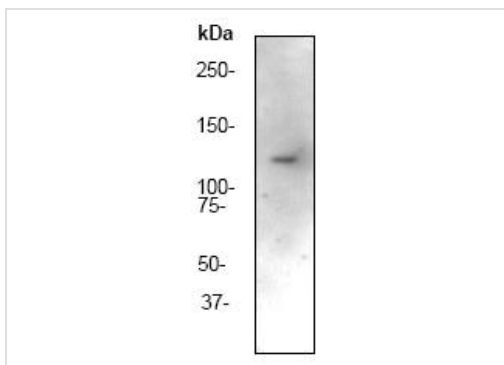
Lane 2 (+): ab32020 & HeLa whole cell lysate

Lane 3 (-): Rabbit monoclonal IgG ([ab172730](#)) instead of ab32020 in HeLa whole cell lysate

For western blotting, VeriBlot for IP Detection Reagent (HRP)

([ab131366](#)) was used for detection at 1:1000 dilution.

Blocking and diluting buffer: 5% NFDM/TBST.



Western blot - Anti-Telomerase reverse transcriptase antibody [Y182] (ab32020)

Anti-Telomerase reverse transcriptase antibody [Y182] (ab32020)

at 1/1000 dilution + HeLa (human epithelial cell line from cervix adenocarcinoma) cell lysate

**Predicted band size:** 127 kDa

**Observed band size:** 122 kDa

### Why choose a recombinant antibody?



**Research with confidence**  
Consistent and reproducible results



**Long-term and scalable supply**  
Recombinant technology



**Success from the first experiment**  
Confirmed specificity



**Ethical standards compliant**  
Animal-free production

Anti-Telomerase reverse transcriptase antibody  
[Y182] (ab32020)

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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