

Product datasheet

Anti-Telomerase reverse transcriptase antibody ab94523

2 References 画像数 2

製品の概要

製品名	Anti-Telomerase reverse transcriptase antibody
製品の詳細	Rabbit polyclonal to Telomerase reverse transcriptase
アプリケーション	適用あり: ICC/IF, WB
種交差性	交差種: Human
免疫原	Synthetic peptide conjugated to KLH derived from within residues 1100 to the C-terminus of Human Telomerase.Immunogenの所有権に関して
ポジティブ・コントロール	This antibody gave a positive signal in Human tonsil tissue lysate as well as the following whole cell lysates: HeLa; Jurkat; MOLT4.

製品の特性

製品の状態	Liquid
保存方法	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
バッファー	Preservative: 0.02% Sodium Azide Constituents: 1% BSA, PBS, pH 7.4
精製度	Immunogen affinity purified
ポリ/モノ	ポリクローナル
アイソタイプ	IgG

アプリケーション

Our [Abpromise guarantee](#) covers the use of **ab94523** in the following tested applications.

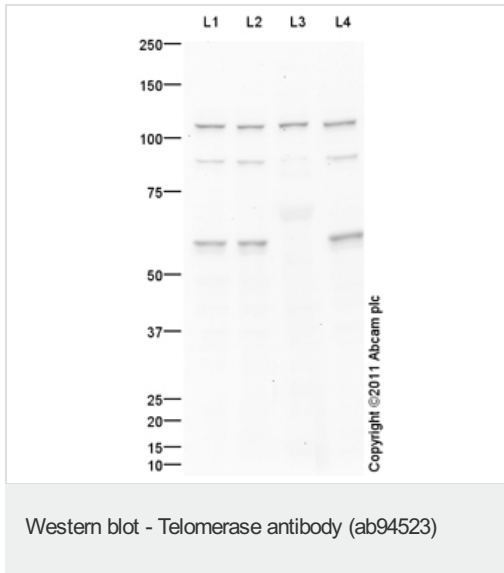
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

アプリケーション	Abreviews	特記事項
ICC/IF		Use a concentration of 1 µg/ml.
WB		Use a concentration of 1 µg/ml. Predicted molecular weight: 126 kDa.

機能	<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>
組織特異性	<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>
関連疾患	<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).</p> <p>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 with bone marrow failure, infections, fatal pulmonary complications, or malignancy.</p> <p>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.</p>
配列類似性	<p>Belongs to the reverse transcriptase family. Telomerase subfamily.</p> <p>Contains 1 reverse transcriptase domain.</p>
ドメイン	<p>The primer grip sequence in the RT domain is required for telomerase activity and for stable association with short telomeric primers.</p> <p>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.</p> <p>The RNA-interacting domain 2 (RD2) is essential for both interaction with the CR4-CR5 domain of TERC and for DNA synthesis.</p>
翻訳後修飾	<p>Ubiquitinated, leading to proteasomal degradation.</p> <p>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.</p>
細胞内局在	<p>Nucleus > nucleolus. Nucleus > nucleoplasm. Nucleus. Chromosome > telomere. Cytoplasm.</p>

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.

画像



All lanes : Anti-Telomerase reverse transcriptase antibody (ab94523) at 1 µg/ml

Lane 1 : HeLa (Human epithelial carcinoma cell line) Whole Cell Lysate

Lane 2 : Jurkat (Human T cell lymphoblast-like cell line) Whole Cell Lysate

Lane 3 : Tonsil (Human) Tissue Lysate

Lane 4 : MOLT4 (Human acute lymphoblastic leukemia cell line) Whole Cell Lysate

Lysates/proteins at 10 µg per lane.

Secondary

Goat Anti-Rabbit IgG H&L (HRP) preadsorbed (ab97080) at 1/5000 dilution

Developed using the ECL technique

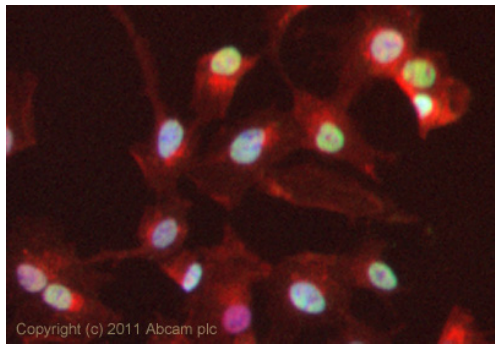
Performed under reducing conditions.

Predicted band size : 126 kDa

Observed band size : 115 kDa

Additional bands at : 57 kDa,90 kDa. We are unsure as to the identity of these extra bands.

Exposure time : 90 seconds



Immunocytochemistry/ Immunofluorescence -
Telomerase antibody (ab94523)

ICC/IF image of ab94523 stained HepG2 cells. The cells were 4% PFA fixed (10 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab94523, 1µg/ml) overnight at +4°C. The secondary antibody (green) was Alexa Fluor® 488 goat anti-rabbit IgG (H+L) used at a 1/1000 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM. This antibody also gave a positive result in 4% PFA fixed (10 min) HeLa cells at 1µg/ml.

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