abcam

Product datasheet

Anti-Telomerase reverse transcriptase antibody [Y182] ab32020

リコンビナント RabMAb

★★★★★ 9 Abreviews 101 References 画像数 4

製品の概要

製品名	Anti-Telomerase reverse transcriptase antibody [Y182]
製品の詳細	Rabbit monoclonal [Y182] to Telomerase reverse transcriptase
由来種	Rabbit
アプリケーション	**適用あり:** WB, IP **適用なし:** ICC/IF or IHC-P
種交差性	**交差種:** Human **交差が予測される動物種:** Cow
免疫原	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
ポジティブ・コントロール	WB: HeLa, HEK-293, Jurkat, SK-BR-3, HL60, MCF7, PC-3 and K-562 cell lysates. IP: HeLa whole cell lysate.
特記事項	This product is a recombinant monoclonal antibody, which offers several advantages including: - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production For more information **see here**. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**. Mouse: We have preliminary internal testing data to indicate this antibody may not react with this species. Please contact us for more information.

製品の特性

製品の状態	Liquid
保存方法	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
バッファー	pH: 7.20 Preservative: 0.01% Sodium azide Constituents: PBS, 0.05% BSA, 40% Glycerol
精製度	Protein A purified

特記事項（精製）	Cells supernatant
ポリ/モノ	モノクローナル
クローン名	Y182
アイソタイプ	IgG

アプリケーション

The Abpromise guarantee **Abpromise保証は、次のテスト済みアプリケーションにおけるab32020の使用に適用されます**

アプリケーションノートには、推奨の開始希釈率がありますが、適切な希釈率につきましてはご検討ください。

アプリケーション	Abreviews	特記事項
WB	★★★★★ (2)	1/1000. Detects a band of approximately 122 kDa (predicted molecular weight: 127 kDa).
IP	★★★★★ (1)	1/100.

追加情報 Is unsuitable for ICC/IF or IHC-P.

ターゲット情報

機能 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 teleromerase 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.

組織特異性 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.

関連疾患 Note=Activation of telomerase has been implicated in cell immortalization and cancer cell pathogenesis.
Defects in TERT are associated with susceptibilty 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.
Note=Genetic variations in TERT are associated with coronary artery disease (CAD).
Defects in TERT are a cause of dyskeratosis congenita autosomal dominant (ADDKC) [MIM:127550]; also known as dyskeratosis congenita Scoggins type. ADDKC 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.
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.

配列類似性

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

ドメイン

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.

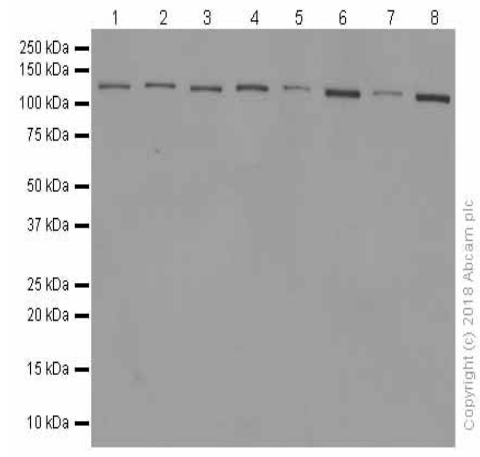
翻訳後修飾

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.

細胞内局在

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.

画像



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

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

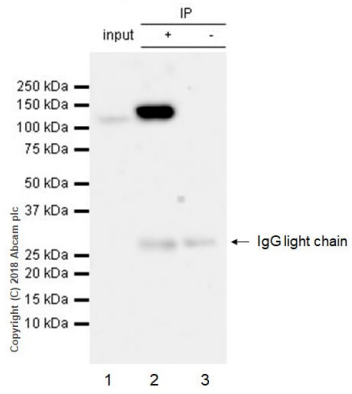
Lane 1 : HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysates
Lane 2 : HEK-293 (Human embryonic kidney epithelial cell) whole cell lysates
Lane 3 : Jurkat (Human T cell leukemia T lymphocyte) whole cell lysates
Lane 4 : SK-BR-3 (Human breast adenocarcinoma epithelial cell) whole cell 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.

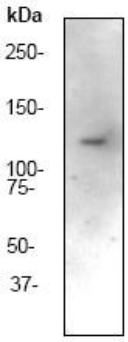
Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/20000 dilution

Predicted band size: 127 kDa
Observed band size: 127 kDa



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

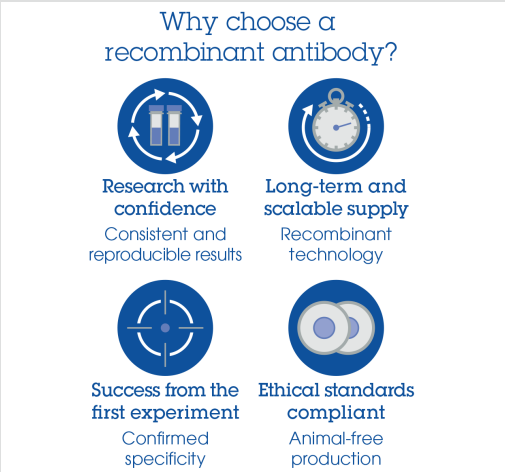
ab32020 (purified) at 1:100 dilution (2µg) immunoprecipitating Telomerase reverse transcriptase in HeLa whole cell lysate.
Lane 1 (input): HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysate 10µg
Lane 2 (+): ab32020 & HeLa whole cell lysate
Lane 3 (-): Rabbit monoclonal IgG (**ab172730**) 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



Anti-Telomerase reverse transcriptase antibody

[Y182] (ab32020)

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