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Product datasheet

Anti-Telomerase reverse transcriptase (phospho S824) antibody ab63558

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製品の概要

製品名 Anti-Telomerase reverse transcriptase (phospho S824) antibody

製品の詳細 Rabbit polyclonal to Telomerase reverse transcriptase (phospho S824)

由来種 Rabbit

特異性 ab63558 detects endogenous levels of TERT only when phosphorylated at serine 824.

 アプリケーション
 適用あり: WB

 種交差性
 交差種: Human

免疫原 Synthetic peptide corresponding to Human Telomerase reverse transcriptase (phospho S824).

Synthesized phosphopeptide derived from human Telomerase around the phosphorylation site of

serine 824 (G-K-SP-Y-V). Database link: **O14746**

ポジティブ・コントロール extracts from COLO205 cells

The Life Science industry has been in the grips of a reproducibility crisis for a number of years.

Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets

your needs before purchasing.

If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be

found below, along with publications, customer reviews and Q&As

製品の特性

特記事項

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: 7.40

Preservative: 0.02% Sodium azide

Constituents: PBS, 50% Glycerol (glycerin, glycerine), 0.87% Sodium chloride

精製度 Immunogen affinity purified

特記事項(精製) The antibody against non-phosphopeptide was removed by chromatography using non-

phosphopeptide corresponding to the phosphorylation site.

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ポリモノ

ポリクローナル

アイソタイプ

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アプリケーション

The Abpromise guarantee <u>Abpromise保証は、</u>次のテスト済みアプリケーションにおけるab63558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	*** <u>*</u>	1/500 - 1/1000. Predicted molecular weight: 127 kDa.

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

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

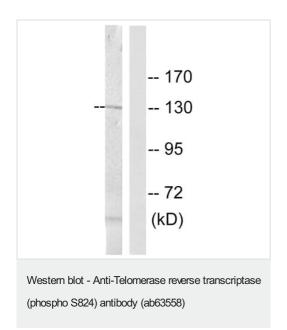
Ubiquitinated, leading to proteasomal degradation.

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



All lanes : Anti-Telomerase reverse transcriptase (phospho S824) antibody (ab63558) at 1/500 dilution

Lane 1: extracts from COLO205 cells

Lane 2: extracts from COLO205 cells plus immunising peptide at

10ug

Lysates/proteins at 30 µg per lane.

Predicted band size: 127 kDa **Observed band size:** 130 kDa

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