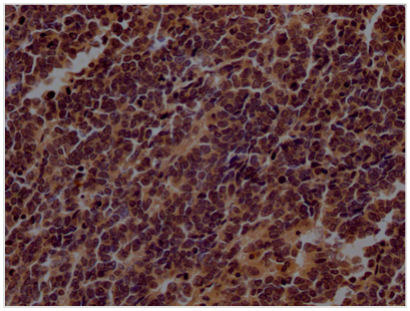
TERT Antibody

Product Code	CSB-RA798840A0HU
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	O14746
Immunogen	A synthesized peptide derived from human TERT
Species Reactivity	Human
Tested Applications	ELISA, IHC; Recommended dilution: IHC:1:50-1:200
Relevance	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.
Form	Liquid
Conjugate	Non-conjugated
Storage Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purification Method	Affinity-chromatography
Isotype	Rabbit IgG
Clonality	Monoclonal
Product Type	Recombinant Antibody
Immunogen Species	Homo sapiens (Human)
Research Area	Epigenetics and Nuclear Signaling; Cancer; Developmental biology; Stem cells
Gene Names	TERT
Accession NO.	5C11
Image	



IHC image of CSB-RA798840A0HU diluted at 1:100 and staining in paraffin-embedded human lung cancer performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4°C overnight. The primary is detected by a Goat anti-rabbit IgG polymer labeled by HRP and visualized using 0.05% DAB.

Description

The production of the recombinant TERT antibody depended on Single B Cell technology. There are 3 main steps in the production: 1, Isolation of single B cells. High-throughput methods could be used to obtain the efficient identification and desired specificity of B cells. 3, Single B cell antibody sequencing and cloning. In this step, the antibody gene sequence of TERT was obtained and introduced to plasmids, which then would be transferred to mammalian cells for in vitro expression of the TERT antibody. 3, Screening of antibodies. The target antibody was obtained in this step. And it has been validated in ELISA, IHC.

TERT, a catalytic subunit of telomerase, plays a key role in cancer formation. It maintains telomere length to ensure chromosomal stability, thus allowing cells to avoid senescence. Mutations in the TERT gens can affect telomerase activity and telomere length, resulting in serious clinical manifestations such as bone marrow failure syndromes and a significant increase in cancer incidence. It has been demonstrated that enhanced TERT expression causes telomerase activity to be restored, indicating TERT transcriptional control as a critical component in diseases such as aging and cancer.