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TP2 Antibody
Rabbit Polyclonal Antibody
Catalog # ABV10729

Specification

TP2 Antibody - Product Information

Application	**WB**
Primary Accession	O14746
Other Accession	EAX08165.1
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**126997**

TP2 Antibody - Additional Information

Gene ID 7015

Positive Control	**3T3 cell lysate**
Application & Usage	**Western blot analysis (1-4 µg/ml). However, the optimal conditions should be determined individually. 3T3 cell lysate can be used as a positive control.**

Other Names
Telomerase reverse transcriptase, HEST2, Telomerase catalytic subunit, Telomerase-associated protein 2, TP2, TEAP

Target/Specificity
TP2

Antibody Form
Liquid

Appearance
Colorless liquid

Formulation
100 µg (0.5 mg/ml) affinity purified rabbit anti-TP2 polyclonal antibody in phosphate buffered saline (PBS), pH 7.2, containing 30% glycerol, 0.5% BSA, 0.01% thimerosal

Handling
The antibody solution should be gently mixed before use.

Reconstitution & Storage
-20 °C

Background Descriptions

Precautions
TP2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

TP2 Antibody - Protein Information

Name TERT

Synonyms EST2, TCS1, TRT

Function
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.

Cellular Location
Nucleus, nucleolus. Nucleus, nucleoplasm. Nucleus. Chromosome, telomere. Cytoplasm Nucleus, PML body. Note=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

Tissue Location
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

TP2 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

TP2 Antibody - Images

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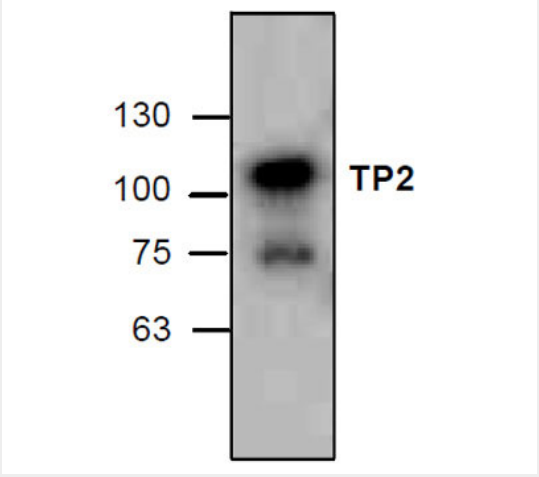

Western blot analysis of TP2 with rat kidney tissue lysate.

TP2 Antibody - Background

Telomerase is an RNA-dependant DNA polymerase that catalyzes the addition of telemoric repeat, TTAGGG to chromosome ends. Telomerase is composed of an internal telomerase RNA template (TERC) and the enzyme, telomerase reverse transcriptase (TERT or TP2). Telomerase expression is usually repressed in postnatal somatic cells resulting in shortening of telomeres. Overexpression of telomerase may be implicated with oncogenesis.