

Product Specification Sheet

Telomerase (Telomerase reverse transcriptase 1) Antibodies

Cat. # EST25-P	Yeast/Telomerase Control Peptide,	SIZE: 100 ug;
Cat. # EST25-S	Chicken Anti-Yeast Telomerase Antisera #2,	SIZE: 100 ul

The 3'ends of chromosomes are capped with telomere sequences (TTAGGG; 6-26 nucleotides in length) by ribonucleoprotein telomerase during DNA replication. Telomerase is an unusual RNA-dependent DNA polymerase that uses an RNA component to specify the addition of telomere. The telomeric RNA contains a sequence complementary to TTAGGG. In ciliated protozoa and yeast, telomere length is maintained by regulating the activity of telomerase. Many mammalian cells do not express telomerase resulting into shortening of telomere with each cell division, and ultimately causing the chromosomal instability, aging and cell death. Approx. 4.8 kb of telomeric DNA is lost with each cell division resulting into large number of chromosomal abnormalities. Most recently, introduction of telomerase into normal human cells has been shown to extend normal cell life by ~ 20 doubling. (2).

Purification of telomerase from the ciliate also revealed two protein of 43 and 123 kDa. p123 is a homolog of yeast **Est2** (Essential for Telomerase activity). Mammalian homologs of yeast Est2 (also known as TP2 for Telomerase associated Protein 2; hEST2 or telomerase catalytic subunit or telomerase reverse transcriptase, TERT) have also been cloned (human Est2, 1132 aa; mouse Est2 1122 aa; ~127 kDa). hEST2 was localized in the nucleus. Yeast telomerase is 988 aa protein.

Source of Antigen and Antibodies

Antigen	23-aa peptide of Yeast EST2 ; Designated (EST25-P or control peptide). conjugated to KLH; epitope location ~ N-terminus
Ab Host/type	Chicken, polyclonal Unpurified antiserum (cat #EST25-S) Aff pure IgG (cat #EST25-A)
2-AB	Goat Anti-chicken IgG-HRP cat # 60320 (AP, biotin, FITC conjugates also available)
-ve control IgG	Cat # 20010-1, Chicken (non-immune) Serum IgG, purified, suitable for ELISA, Western, IHC as -ve control

Form & Storage of Antibodies/Peptide Control

Antiserum (unpurified)

100ul solution lyophilized powder
Supplied 0.05% azide, **Reconstitute** powder in 100 ul PBS

Affinity pure IgG

100 ug/100ul solution lyophilized powder
Supplied in **Buffer:** PBS+0.1% BSA
Reconstitute powder in PBS at 1mg/ml

Control/blocking peptide

100 ug/100 ul solution lyophilized powder
Supplied in **Buffer:** PBS pH 7.5,
Reconstitute powder in PBS at 1 mg/ml.

Storage

Short-term: unopened, undiluted liquid vials at -20OC and powder at 4oC or -20oC..

Long-term: at -20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at -20oC or below.

Shipping: 4oC for solutions and room temp for powder

Recommended Usage

Western Blotting (1:1K-5K for neat serum and 1-10 ug/ml for affinity pure antibody using Chemiluminescence technique).

ELISA: Control peptide can be used to coat ELISA plates at 1 ug/ml and detected with antibodies (1:10-50K for neat serum and 0.5-1 ug/ml for affinity pure).

Histochemistry & Immunofluorescence: Not tested. We recommend the use of affinity purified antibody at 1-20 ug/ml in paraformaldehyde fixed sections of tissues.

Specificity & Cross-reactivity

The 23 AA yeast EST25 control peptide has no significant sequence homology with mammalian telomerases. We recommend the use EST21-23 for detection of human and mouse telomerase. Actual cross-reactivity of antibodies in various species has not been studied. Control peptide, because of its low mol. Wt (<3 kDa), is not suitable for Western. It should be used for ELISA or antibody blocking experiments (use 5-10 ug control peptide per 1 ug of aff pure IgG or 1 ul antiserum) to confirm antibody specificity (see detailed protocol at the web site).

General References:

Nakamura Tm et al (1997) Science 277, 955-959; Meyerson M et al (1997) Cell 90, 785-795; Greenberg RA et al (1998) Oncogene in press; Nugent CI et al (1998) Genes Develop. 12, 1073-85 (review).

Citations of ADI's antibodies for Telomerase/ Est's (see updated list at the web site)

*This product is for In vitro research use only.

Related material available from ADI

Antibodies Est2, TRF1, TRF2, TP1/TLP1
Klohto, Survivin, p73, p63

Recycle your blot in Just 5-10 min. (use the same strip for various Dopamine receptors) New formulation will strip antibodies in just a few minutes at room temp. (no boiling or pungent mercaptoethanol).

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