

Telomeric Repeat Binding Factor (TRF1) Antibodies

<input type="checkbox"/> Cat. # TRF12-P	Mouse TRF1 control/blocking Peptide # 2	SIZE: 100 ug
<input type="checkbox"/> Cat. # TRF12-S	Rabbit Anti-Mouse TRF1 Antiserum # 2	SIZE: 100 ul
<input type="checkbox"/> Cat. # TRF12-A	Rabbit Anti-Mouse TRF1 IgG # 2 (aff pure)	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 and 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.

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). (1). **Telomeric Repeat binding Factors (TRF1 and TRF2)** bind the telomeric TTAGGG repeat. TRFs have been colocalized with telomeric DNA in metaphase cells. TRFs are located at chromosome ends during metaphase. Mouse and human TRF1 are 421 aa and 439 aa, respectively. TRF1 and TRF2 share ~30% homology.

Function: Binds the telomeric double-stranded TTAGGG repeat and negatively regulates telomere length. Involved in the regulation of the mitotic spindle (By similarity).

Subcellular Location: Nucleus (By similarity). Note=Colocalizes with telomeric DNA in interphase and metaphase cells and is located at chromosome ends during metaphase. Associates with the mitotic spindle (By similarity).

Similarity: Contains 1 HTH myb-type DNA-binding domain.

Protein name Telomeric repeat-binding factor 1

Synonym TTAGGG repeat-binding factor 1

Gene name Name: Terf1; Synonyms: Trf1

Source of Antigen, Antibodies

Antigen	19-aa peptide of Mouse TRF1 ; (protein accession #P70371, refs 1) Designated (TRF12-P or control peptide /blocking peptide) conjugated to KLH; Epitope location ~N-terminus, Cytoplasmic domain
Ab Host/type	Rabbit, Polyclonal IgG, purified (Cat # TRF12-A) purified over the antigen column
2-Ab	Cat # 20320, goat anti-rabbit IgG-HRP (AP, biotin, FITC conjugates also available).
-ve control	# 20009-1, Rabbit (non-immune) IgG, purified, suitable for ELISA, Western, IHC as -ve control

Form & Storage of Antibodies/Peptide Control

Antiserum (unpurified)

- 100ul solution lyophilized powder

Supplied in Buffer: 0.05% azide

Reconstitute powder in 100 ul PBS

Affinity pure IgG

- 100ul solution lyophilized powder

Supplied in **Buffer:** PBS+0.1% BSA

Reconstitute powder in PBS

Control/blocking peptide

- 100 ug/100 ul solution lyophilized powder

Supplied in Buffer: PBS pH 7.5,

Reconstitute powder in PBS

Storage

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

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

Stability: 6-12 months at -20°C or below.

Shipping: 4°C 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.

Specificity & Cross-reactivity

The Mouse TRF12-P control peptide has no significant sequence homology with other TRF2. We recommend the use of TRF11 (antibody # 1) for the use human TRF1. Antibody crossreactivity in various species is not established. 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

General References: 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), Chong L et al (1995) Science 270, 1663-1667; Broccoli D et al Gene accession # P70371.

Citations of ADI's antibodies for Telomerase/ Est's (see updated list at: www.4adi.com/flr/telomerase.html)

*This product is for In vitro research use only.

Related material available from ADI

Antibodies Est2, TRF1, TRF2, TP1, Kohto, Survivin, p73
Recycle your blot in Just 5-10 min. (use the same strip for various Dopamine receptors)

TRF12-S-A-P

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