

Telomeric Repeat Binding Factor 2 (TRF2) Antibodies

Cat # TRF21-P	Mouse TRF2 control/blocking Peptide # 1	SIZE: 100 ug
Cat # TRF21-S	Rabbit Anti- Mouse TRF2 Antiserum #1	SIZE: 100 ul
Cat # TRF21-A	Rabbit Anti- Mouse TRF2 IgG # 1 (aff pure)	SIZE: 100 ug

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. 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 proteins 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 TRF2 are 495 aa and 500 aa, respectively. TRF1 and TRF2 share ~30% homology.

Function: Binds the telomeric double-stranded TTAGGG repeat. Protects against end-to-end fusion of chromosomes and plays a role in successful progression through the cell division cycle.

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

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

Protein name Telomeric repeat-binding factor 2

Synonyms TTAGGG repeat-binding factor 2

Telomeric DNA-binding protein

Gene name Name: Terf2; Synonyms: Trf2

Source of Antigen and Antibodies

Antigen	21aa peptide of Mouse TRF2; (protein accession #O35144, refs 1) Designated (TRF21-P or control peptide) . conjugated to KLH; Epitope location ~ C-terminus
Ab Host/type	Rabbit, polyclonal Aff pure IgG (cat #TRF21-S) purified over the antigen column, Aff pure IgG purified using antigen-agarose column (cat # TRF21-A) supplied in PBS + 0.1% BSA
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)

100 ul Solution Lyophilized powder

Supplied in Buffer: 0.1% azide

Reconstitute powder in 100 ul PBS

Affinity pure IgG

100 ug/100 ul 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 **-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) **NOT TESTED**

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 ab at 1-20 ug/ml.

Specificity & Cross-reactivity

The 21 AA Mouse TRF21 control peptide has no significant sequence homology with TRF1. Mouse TRF21 has 71% sequence homology with the human TRF2. 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 Cl et al (1998) Genes Develop. 12, 1073-85 (review), Chong L et al (1995) Science 270, 1663-1667; Broccoli D et al Gene accession # AF00299 & AF003000.

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/TLP1, Tankyrase

TRF21-S-A-P

rev. 210609AC