

Product Specification Sheet

**Telomeric Repeat Binding Factor (TRF1) Antibodies**

Cat. # TRF11-P	Human TRF1 Control Peptide #1	<b>SIZE:</b> 100 ug
Cat. # TRF11-S	Rabbit Anti-Human TRF1 Antisera #1	<b>SIZE:</b> 100 ul
Cat. # TRF11-A	Rabbit Anti-Human TRF1 Ig G # 1 (affinity pure)	<b>SIZE:</b> 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 and 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 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 TRF2 are 495 aa and 500 aa, respectively. TRF1 and TRF2 share ~30% homology.

**Source of Antigen, Antibodies, and Positive Controls**

<b>Antigen</b>	20aa peptide of Human TRF1 ; <b>Designated (TRF11-P or control peptide) conjugated to KLH; epitope location ~ C-terminus</b>
<b>Ab Host/type</b>	Rabbit, polyclonal Unpurified antiserum (cat #TRF11-S) Aff pure IgG (Cat #TRF11-A) purified over antigen-agarose column
<b>2-ab</b>	<b>Goat Anti-rabbit IgG-HRP</b> cat # 20320 (AP, biotin, FITC conjugates also available)
<b>-ve control IgG</b>	<b># 20009-1, Rabbit (non-immune) IgG, purified, suitable for ELISA, Western, IHC as -ve control</b>

**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 -200C 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 ECL 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 ab at 1-20 ug/ml.

**Specificity & Cross-reactivity**

The 20 AA human TRF11 control peptide has no significant sequence homology with TRF2. We recommend the use of TRF12 (antibody # 2) for the use mouse 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 (see detailed protocol at the web site).

**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 # P70731.

\*This product is for In vitro research use only.

**Related material available from ADI**

Antibodies Est2, TRF1, TRF2, TP1, Klotho, Survivin, p73,

TRF11-S-A-P

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