

## Product datasheet

# Anti-TRF2 antibody ab4182

★★★★☆ [2 Abreviews](#) [6 References](#) [3 Images](#)

### Overview

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<b>Product name</b>	Anti-TRF2 antibody
<b>Description</b>	Rabbit polyclonal to TRF2
<b>Host species</b>	Rabbit
<b>Specificity</b>	This antibody detects bands of 65 and 69 kDa which correspond to TRF2.
<b>Tested applications</b>	<b>Suitable for:</b> ICC/IF, WB
<b>Species reactivity</b>	<b>Reacts with:</b> Human
<b>Immunogen</b>	Synthetic peptide corresponding to TRF2 aa 250-350 conjugated to keyhole limpet haemocyanin. (Peptide available as <a href="#">ab13765</a> , <a href="#">ab24679</a> )
<b>Positive control</b>	HeLa nuclear extract; HeLa whole cell lysate; HeLa nuclear lysate; HeLa whole cell lysate;
<b>General notes</b>	

Human telomeres are composed of long arrays of TTAGGG repeats that form a nucleoprotein complex required for the protection and replication of chromosome ends. TRF2 is ubiquitously expressed, bound specifically to duplex TTAGGG repeats in vitro, and localized to all human telomeres in metaphase chromosomes. It is expressed as 2 proteins of 65 and 69 kD. Affinity-purified antibodies specific for anti-TRF2 labeled the telomeres of intact human chromosomes, strengthening the correlation between occurrence of telobox and telomere-repeat recognition in vivo. TRF2 is likely to bind to double-stranded telomeric DNA as a homodimer.

The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.

If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

### Properties

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<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
<b>Storage buffer</b>	pH: 7.40

Preservative: 0.02% Sodium azide

Constituent: PBS

Batches of this product that have a concentration < 1mg/ml may have BSA added as a stabilising agent. If you would like information about the formulation of a specific lot, please contact our scientific support team who will be happy to help.

<b>Purity</b>	Immunogen affinity purified
<b>Primary antibody notes</b>	Human telomeres are composed of long arrays of TTAGGG repeats that form a nucleoprotein complex required for the protection and replication of chromosome ends. TRF2 is ubiquitously expressed, bound specifically to duplex TTAGGG repeats in vitro, and localized to all human telomeres in metaphase chromosomes. It is expressed as 2 proteins of 65 and 69 kD. Affinity-purified antibodies specific for anti-TRF2 labeled the telomeres of intact human chromosomes, strengthening the correlation between occurrence of telobox and telomere-repeat recognition in vivo. TRF2 is likely to bind to double-stranded telomeric DNA as a homodimer.
<b>Clonality</b>	Polyclonal
<b>Isotype</b>	IgG

## Applications

**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab4182 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

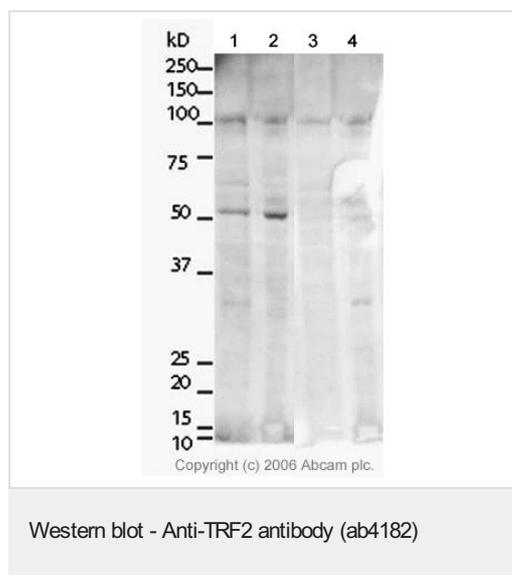
Application	Abreviews	Notes
ICC/IF	★★★★★ (2)	Use a concentration of 1 µg/ml.
WB		1/1000. Detects a band of approximately 65, 69 kDa (predicted molecular weight: 55.5 kDa).

## Target

**Function** Binds the telomeric double-stranded 5'-TTAGGG-3' repeat and plays a central role in telomere maintenance and protection against end-to-end fusion of chromosomes. In addition to its telomeric DNA-binding role, required to recruit a number of factors and enzymes required for telomere protection, including the shelterin complex, TERF2IP/RAP1 and DCLRE1B/Apollo. Component of the shelterin complex (telosome) that is involved in the regulation of telomere length and protection. Shelterin associates with arrays of double-stranded 5'-TTAGGG-3' repeats added by telomerase and protects chromosome ends; without its protective activity, telomeres are no longer hidden from the DNA damage surveillance and chromosome ends are inappropriately processed by DNA repair pathways. Together with DCLRE1B/Apollo, plays a key role in telomeric loop (T loop) formation by generating 3' single-stranded overhang at the leading end telomeres: T loops have been proposed to protect chromosome ends from degradation and repair. Required both to recruit DCLRE1B/Apollo to telomeres and activate the exonuclease activity of DCLRE1B/Apollo. Preferentially binds to positive supercoiled DNA. Together with DCLRE1B/Apollo, required to control the amount of DNA topoisomerase (TOP1, TOP2A and TOP2B) needed for telomere replication during fork passage and prevent aberrant telomere topology. Recruits TERF2IP/RAP1 to telomeres, thereby participating in to repressing homology-directed repair (HDR), which can affect telomere length.

<b>Tissue specificity</b>	Ubiquitous. Highly expressed in spleen, thymus, prostate, uterus, testis, small intestine, colon and peripheral blood leukocytes.
<b>Sequence similarities</b>	Contains 1 HTH myb-type DNA-binding domain.
<b>Domain</b>	The TRFH dimerization region mediates the interaction with DCLRE1B/Apollo but not TIN2.
<b>Post-translational modifications</b>	Phosphorylated upon DNA damage, probably by ATM or ATR.
<b>Cellular localization</b>	Nucleus. Chromosome > telomere. Colocalizes with telomeric DNA in interphase cells and is located at chromosome ends during metaphase.

## Images



**All lanes :** Anti-TRF2 antibody (ab4182) at 1 µg/ml

**Lane 1 :** HeLa nuclear extract

**Lane 2 :** HeLa whole cell lysate

**Lane 3 :** HeLa nuclear lysate with Human TRF2 peptide (**ab13765**) at 1 µg/ml

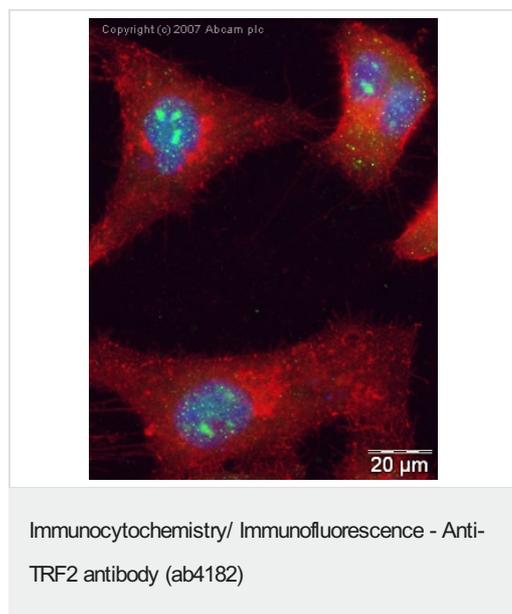
**Lane 4 :** HeLa whole cell lysate with Human TRF2 peptide (**ab13765**) at 1 µg/ml

Lysates/proteins at 20 µg per lane.

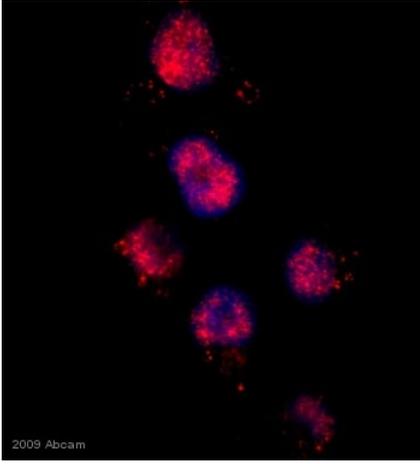
### Secondary

**All lanes :** Goat Anti-Rabbit IgG H&L (HRP) (**ab6721**) at 1/5000 dilution

**Predicted band size:** 55.5 kDa



ICC/IF image of ab4182 stained human HeLa cells. The cells were PFA fixed (10 min), permeabilised in TBS-T (20 min) and incubated with the antibody (ab4182, 1µg/ml) for 1h at room temperature. 1%BSA / 10% normal goat serum / 0.3M glycine was used to quench autofluorescence and block non-specific protein-protein interactions. The secondary antibody (green) was Alexa Fluor® 488 goat anti-rabbit IgG (H+L) used at a 1/1000 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red). DAPI was used to stain the cell nuclei (blue).



ab4182 staining TRF2 in human Breast carcinoma cells by Immunocytochemistry/ Immunofluorescence. Cells were fixed with paraformaldehyde, permeabilized with 0.5% Triton-x100 and blocking with 2% serum was performed for 30 minutes at 37°C. Samples were incubated with primary antibody at 1/100 dilution in PBS for 2 hours at 37°C. An Alexa Fluor® 594 conjugated goat monoclonal to rabbit IgG was used at 1/75 dilution as secondary antibody.

Immunocytochemistry/ Immunofluorescence - Anti-TRF2 antibody (ab4182)

This image is a courtesy of Anonymous Abreview

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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