

## Product datasheet

### Anti-TRF1 antibody ab1423

★★★★ 4 Abreviews 39 References 3 Images

#### Overview

|                     |   |
|---------------------|---|
| Product name        | Anti-TRF1 antibody  |
| Description         | Rabbit polyclonal to TRF1   |
| Host species        | Rabbit  |
| Tested applications | <b>Suitable for:</b> ICC, WB<br><b>Unsuitable for:</b> IHC-P  |
| Species reactivity  | <b>Reacts with:</b> Human   |
| Immunogen           | Recombinant full length protein corresponding to Human TRF1. Human full length recombinant protein expressed in bacteria.   |
| General notes       | <p>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.</p> <p>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&amp;As</p> |

#### Properties

|                      |  |
|----------------------|--|
| Form                 | Liquid   |
| Storage instructions | 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. |
| Storage buffer       | pH: 7.20<br>Preservative: 0.05% Sodium azide   |
| Purity               | Whole antiserum  |
| Clonality            | Polyclonal   |
| Isotype              | IgG  |

#### Applications

The **Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab1423 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         |           | Use at an assay dependent concentration.  |
| WB          | ★☆☆☆☆ (3) | 1/2000. Detects a band of approximately 60-65 kDa. An additional non specific band at 35 kDa may be observed. Denatured whole cell extracts (prepare total cell extracts with 6M urea, 1% SDS, 150 mM NaCl, 25mM Tris pH8, and then sonicate for 10 seconds)and TBS based buffers with 0.5% Tween 20 are recommended. |

#### Application notes

Is unsuitable for IHC-P.

#### Target

##### Function

Binds the telomeric double-stranded TTAGGG repeat and negatively regulates telomere length. Involved in the regulation of the mitotic spindle. Component of the shelterin complex (telosome) that is involved in the regulation of telomere length and protection. Shelterin associates with arrays of double-stranded TTAGGG 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.

##### Tissue specificity

Highly expressed and ubiquitous. Isoform Pin2 predominates.

##### Sequence similarities

Contains 1 HTH myb-type DNA-binding domain.

##### Domain

The acidic N-terminal domain binds to the ankyrin repeats of TNKS1 and TNKS2. The C-terminal domain binds microtubules.

The TRFH dimerization region mediates the interaction with TIN2.

##### Post-translational modifications

Phosphorylated preferentially on Ser-219 in an ATM-dependent manner in response to ionizing DNA damage.

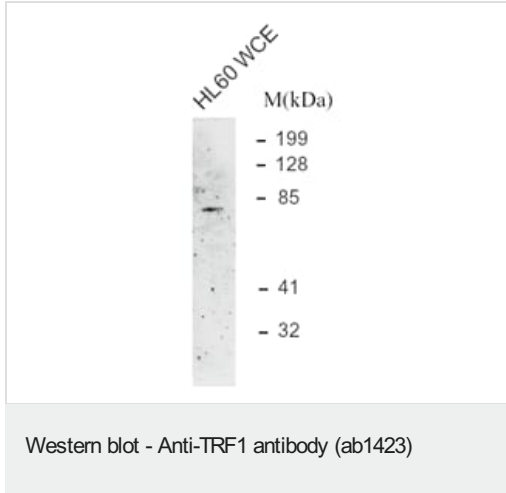
ADP-ribosylation by TNKS1 or TNKS2 diminishes its ability to bind to telomeric DNA.

Ubiquitinated by RLIM/RNF12, leading to its degradation by the proteasome. Ubiquitinated by a SCF (SKP1-CUL1-F-box protein) ubiquitin-protein ligase complex, leading to its degradation by the proteasome.

##### Cellular localization

Nucleus. Cytoplasm > cytoskeleton > spindle. Chromosome > telomere. Colocalizes with telomeric DNA in interphase and metaphase cells and is located at chromosome ends during metaphase. Associates with the mitotic spindle.

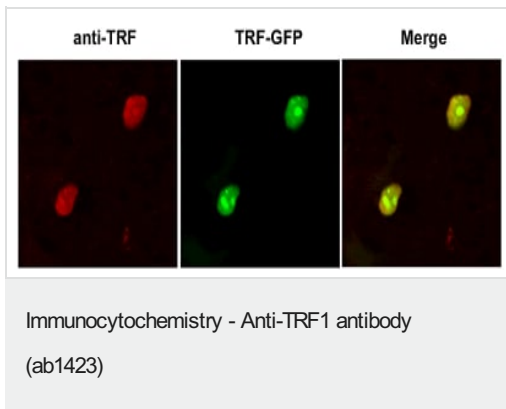
#### Images



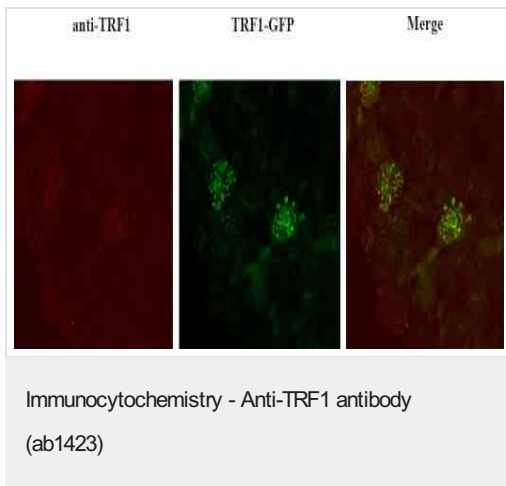
Anti-TRF1 antibody (ab1423) at 1/2000 dilution + HL-60 (Human promyelocytic leukemia cell line) whole cell extract

**Observed band size:** 60-65 kDa

Western blot labelling TRF1 in HL-60 (Human promyelocytic leukemia cell line) whole cell extract using ab1423 at 1/2000. A single band at 60-65 kD is detected.



Cells transfected with a TRF1-GFP construct. On the left: immunofluorescence with the anti-TRF1 antibody used at 1/300, with a Texas Red-conjugated secondary antibody. In the centre: fluorescence from the GFP. Right: merge of both images showing overlap of GFP fluorescence and antibody staining.



The cells in the first image are probably in a stage of the cell cycle where the signal is not so clear. In this image the antibody is shown to recognise the same signal but staining is shown as 20-30 spots (punctate foci).

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