

Product datasheet

Anti-TRF2 antibody [4A794] ab13579

★★★★★ [1 Abreviews](#) [41 References](#) [7 Images](#)

Overview

Product name	Anti-TRF2 antibody [4A794]
Description	Mouse monoclonal [4A794] to TRF2
Host species	Mouse
Tested applications	Suitable for: IHC-P, WB, Flow Cyt (Intra)
Species reactivity	Reacts with: Human
Immunogen	Full length protein corresponding to Human TRF2. Baculovirus expressing full length TRF2 protein. NP_005643 Database link: Q15554
Positive control	WB: Jurkat and HeLa cell lysate Flow Cyt (Intra): Jurkat and HeLa cell lysate
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&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: 7.40 Preservative: 0.05% Sodium azide Constituents: PBS, 0.05% BSA
Purity	Protein G purified
Clonality	Monoclonal
Clone number	4A794
Isotype	IgG1
Light chain type	kappa

Applications

The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab13579 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
IHC-P		Use a concentration of 1 µg/ml.
WB	★★★★★ (1)	Use a concentration of 4 µg/ml. Detects a band of approximately 66 kDa.
Flow Cyt (Intra)		Use 1µg for 10 ⁶ cells. ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

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.

Tissue specificity

Ubiquitous. Highly expressed in spleen, thymus, prostate, uterus, testis, small intestine, colon and peripheral blood leukocytes.

Sequence similarities

Contains 1 HTH myb-type DNA-binding domain.

Domain

The TRFH dimerization region mediates the interaction with DCLRE1B/Apollo but not TIN2.

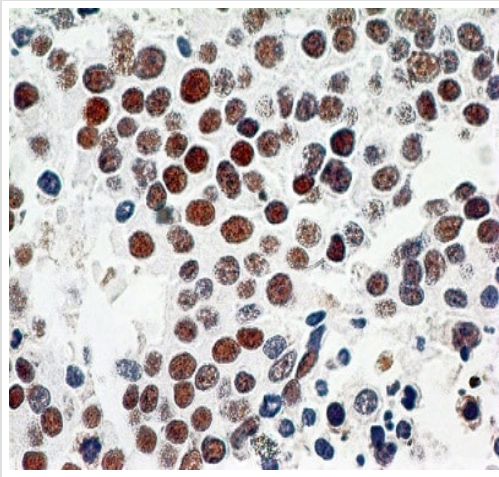
Post-translational modifications

Phosphorylated upon DNA damage, probably by ATM or ATR.

Cellular localization

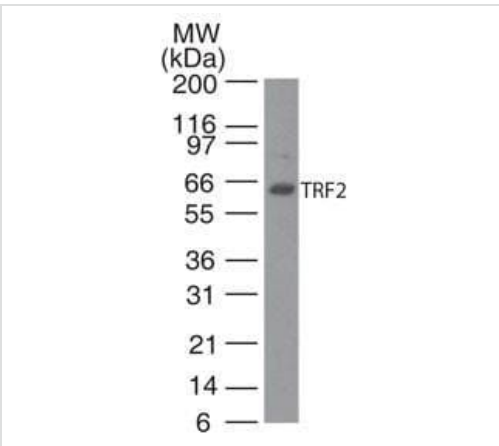
Nucleus. Chromosome > telomere. Colocalizes with telomeric DNA in interphase cells and is located at chromosome ends during metaphase.

Images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TRF2 antibody [4A794] - ChIP Grade (ab13579)

ab13579 staining TRF2 in human bladder carcinoma cells using Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections). Antigen retrieval carried out by heat treatment in Citrate buffer pH6.0. Primary antibody diluted to 4µg/ml.

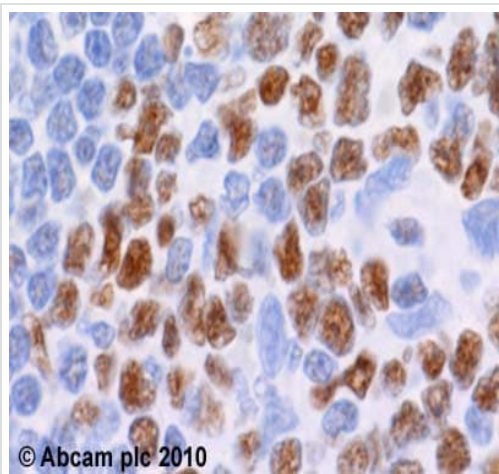


Western blot - Anti-TRF2 antibody [4A794] - ChIP Grade (ab13579)

Anti-TRF2 antibody [4A794] (ab13579) at 2 µg/ml + Jurkat cell lysate

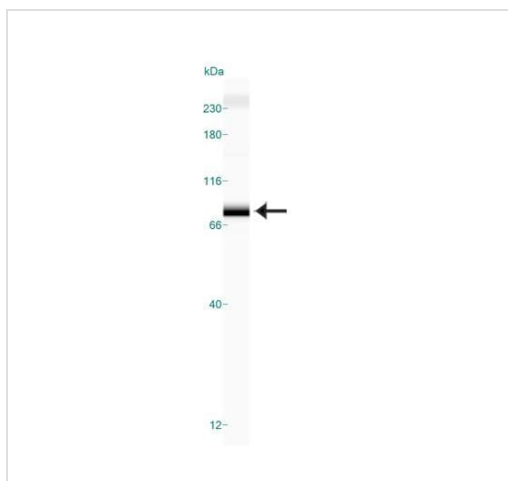
Secondary

Goat anti-mouse Ig HRP



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TRF2 antibody [4A794] - ChIP Grade (ab13579)

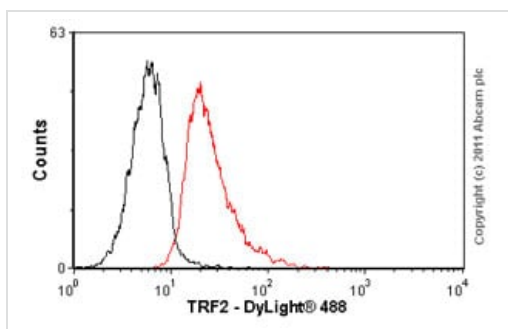
ab13579 (1µg/ml) staining TRF2 in human spleen, using an automated system (DAKO Autostainer Plus). Using this protocol there is strong nuclear staining in the germinal follicle. Sections were rehydrated and antigen retrieved with the Dako 3 in 1 AR buffer EDTA pH 9.0 in a DAKO PT link. Slides were peroxidase blocked in 3% H₂O₂ in methanol for 10 mins. They were then blocked with Dako Protein block for 10 minutes (containing casein 0.25% in PBS) then incubated with primary antibody for 20 min and detected with Dako envision flex amplification kit for 30 minutes. Colorimetric detection was completed with Diaminobenzidine for 5 minutes. Slides were counterstained with Haematoxylin and coverslipped under DePeX. Please note that, for manual staining, optimization of primary antibody concentration and incubation time is recommended. Signal amplification may be required.



Western blot - Anti-TRF2 antibody [4A794] - ChIP Grade (ab13579)

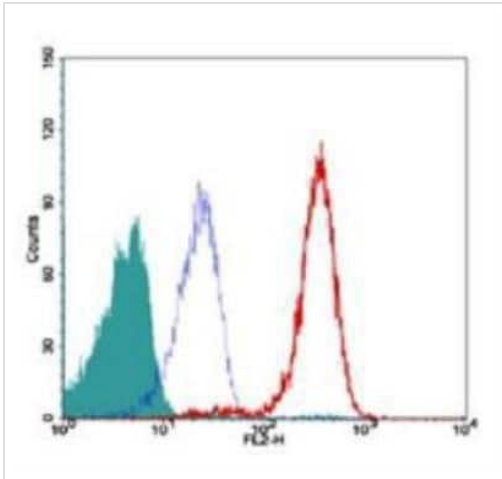
Anti-TRF2 antibody [4A794] (ab13579) + HeLa cell lysate

Performed under reducing conditions.



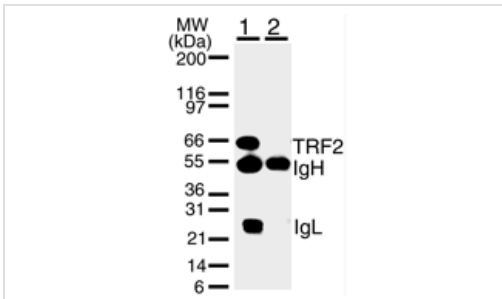
Flow Cytometry (Intracellular) - Anti-TRF2 antibody [4A794] (ab13579)

Overlay histogram showing HeLA cells stained with ab13579 (red line). The cells were fixed with 100% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab13579, 1µg/1x10⁶ cells) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (**ab96879**) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was Mouse IgG1 [CIGG1] (**ab91353**, 2µg/1x10⁶ cells) used under the same conditions. Acquisition of >5,000 events was performed.



Flow Cytometry (Intracellular) - Anti-TRF2 antibody [4A794] (ab13579)

Flow Cytometry (Intracellular) analysis of Jurkat cells labeling RF2 with ab13579 (red). The shaded histogram represents cells alone and blue represents isotype control.



Western blot - Anti-TRF2 antibody [4A794] - ChIP Grade (ab13579)

Immunoprecipitation / Western Blot analysis of TRF2 in HL60 cells. 1. IP with ab13579. 2. IP with control mouse IgG. TRF2 is detected as an ~ 66 kD protein.

Immunoprecipitation / Western Blot analysis of TRF2 in HL60 cells. 1. IP with ab13579. 2. IP with control mouse IgG. TRF2 is detected as an ~ 66 kD protein.

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