

TRF2 (9F10): sc-47693

BACKGROUND

Telomeric repeat binding factor 1 (TRF1, TERF1, PIN2, TRBF1) and telomeric repeat binding factor 2 (TRF2, TERF2, TRBF2) are present at telomeres throughout the cell cycle, where they regulate telomerase by acting in *cis* to limit the elongation of individual chromosome ends. Telomerase adds hexameric repeats of 5'-TTAGGG-3' to the ends of chromosomal DNA. This telomerase enzyme plays an influential role in cellular immortalization and cellular senescence. TRF1 negatively regulates telomere elongation, while TRF2 protects the chromosome ends by inhibiting end-to-end fusions. Down-regulation of TRF expression in tumor cells may contribute to cell immortalization and malignant progression. TRF1 has an acidic N-terminus while TRF2 has a basic N-terminus. TRF2 localizes in the nucleolus at G₀ and S and diffuses out of the nucleolus in G₂ phase. During mitosis TRF2 disperses from the condensed chromosomes and returns to the nucleolus at cytokinesis.

CHROMOSOMAL LOCATION

Genetic locus: TERF2 (human) mapping to 16q22.1; Terf2 (mouse) mapping to 8 D3.

SOURCE

TRF2 (9F10) is a mouse monoclonal antibody raised against human TRF2.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-47693 X, 200 µg/0.1 ml; or azide-free for biological studies, sc-47693 L, 200 µg/0.1 ml.

TRF2 (9F10) is available conjugated to agarose (sc-47693 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-47693 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-47693 PE), fluorescein (sc-47693 FITC), Alexa Fluor® 488 (sc-47693 AF488), Alexa Fluor® 546 (sc-47693 AF546), Alexa Fluor® 594 (sc-47693 AF594) or Alexa Fluor® 647 (sc-47693 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-47693 AF680) or Alexa Fluor® 790 (sc-47693 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

TRF2 (9F10) is recommended for detection of TRF2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for TRF2 siRNA (h): sc-38505, TRF2 siRNA (m): sc-38506, TRF2 shRNA Plasmid (h): sc-38505-SH, TRF2 shRNA Plasmid (m): sc-38506-SH, TRF2 shRNA (h) Lentiviral Particles: sc-38505-V and TRF2 shRNA (m) Lentiviral Particles: sc-38506-V.

TRF2 (9F10) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

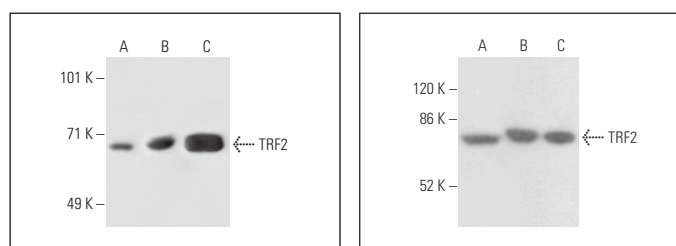
Molecular Weight of TRF2: 70 kDa.

Positive Controls: TRF2 (h): 293T Lysate: sc-113675.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



TRF2 (9F10): sc-47693. Western blot analysis of TRF2 expression in non-transfected: sc-117752 (A) and human TRF2 transfected: sc-113675 (B) 293T whole cell lysates and K-562 nuclear extract (C).

TRF2 (9F10): sc-47693. Western blot analysis of TRF2 expression in NAMALWA whole cell lysate (A) and K-562 (B) and Jurkat (C) nuclear extracts.

SELECT PRODUCT CITATIONS

- Perez-Tenero, C., et al. 2015. Food supplementation with rice bran enzymatic extract prevents vascular apoptosis and atherogenesis in ApoE^{-/-} mice. *Eur. J. Nutr.* 56: 225-236.
- Tascher, G., et al. 2017. Proteome-wide adaptations of mouse skeletal muscles during a full month in space. *J. Proteome Res.* 16: 2623-2638.
- Chan, F.L., et al. 2017. Aurora kinase B, a novel regulator of TERF1 binding and telomeric integrity. *Nucleic Acids Res.* 45: 12340-12353.
- Tran, H.T.T., et al. 2020. Long-term exposure to "low-dose" bisphenol A decreases mitochondrial DNA copy number, and accelerates telomere shortening in human CD8⁺ T cells. *Sci. Rep.* 10: 15786.
- Orhan, C., et al. 2023. Nicotinamide riboside and phycocyanin oligopeptides affect stress susceptibility in chronic corticosterone-exposed rats. *Antioxidants* 12: 1849.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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