

TRF2 (N-20): sc-8528

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. Downregulation 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 (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of TRF2 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for ChIP application, sc-8528 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-8528 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

TRF2 (N-20) 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)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

TRF2 (N-20) is also recommended for detection of TRF2 in additional species, including canine.

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 (N-20) X TransCruz antibody is recommended for ChIP assays.

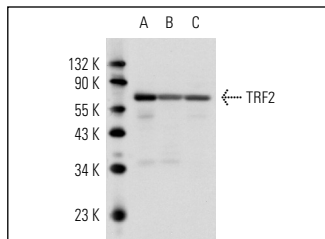
Molecular Weight of TRF2: 70 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, K-562 nuclear extract: sc-2130 or NAMALWA cell lysate: sc-2234.

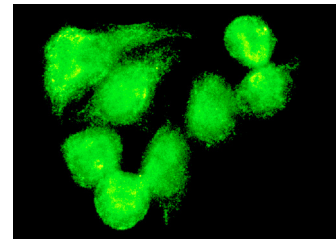
STORAGE

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

DATA



TRF2 (N-20): sc-8528. Western blot analysis of TRF2 expression in Jurkat (A) and K-562 (B) nuclear extracts and NAMALWA whole cell lysate (C).



TRF2 (N-20): sc-8528. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization.

SELECT PRODUCT CITATIONS

1. Pathak, S., et al. 2000. Anvrizel, an extract of *Nerium oleander*, induces cell death in human but not murine cancer cells. *Anticancer Drugs* 11: 455-463.
2. Multani, A.S., et al. 2000. Caspase-dependent apoptosis induced by telomere cleavage and TRF2 loss. *Neoplasia* 2: 339-345.
3. Opreško, P.L., et al. 2002. Telomere-binding protein TRF2 binds to and stimulates the Werner and Bloom syndrome helicases. *J. Biol. Chem.* 277: 41110-41119.
4. D'Adda di Fagnana, F., et al. 2003. A DNA damage checkpoint response in telomere-initiated senescence. *Nature* 426: 194-198.
5. Dantzer, F., et al. 2004. Functional interaction between poly(ADP-Ribose) polymerase 2 (PARP-2) and TRF2: PARP activity negatively regulates TRF2. *Mol. Cell. Biol.* 24: 1595-1607.
6. Spyridopoulos, I., et al. 2004. Statins enhance migratory capacity by upregulation of the telomere repeat-binding factor TRF2 in endothelial progenitor cells. *Circulation* 110: 3136-3142.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.


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Try **TRF2 (B-5): sc-271710** or **TRF2 (9F10): sc-47693**, our highly recommended monoclonal alternatives to TRF2 (N-20).