

TRF1 (H-242): sc-5596

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.

REFERENCES

1. Aragona, M., et al. 2000. Immunohistochemical TRF1 expression in gastrointestinal tumors. *Oncol. Rep.* 7: 987-990.
2. Matsutani, N., et al. 2001. Expression of TRF1 and 2 and TRF1-interacting nuclear protein 2 in human gastric carcinomas. *Int. J. Oncol.* 19: 507-512.

CHROMOSOMAL LOCATION

Genetic locus: TERF1 (human) mapping to 8q21.11; Terf1 (mouse) mapping to 1 A3.

SOURCE

TRF1 (H-242) is a rabbit polyclonal antibody raised against amino acids 155-396 mapping within an internal region of TRF1 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.

APPLICATIONS

TRF1 (H-242) is recommended for detection of TRF1 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).

TRF1 (H-242) is also recommended for detection of TRF1 in additional species, including equine.

Suitable for use as control antibody for TRF1 siRNA (h): sc-36722, TRF1 siRNA (m): sc-36723, TRF1 shRNA Plasmid (h): sc-36722-SH, TRF1 shRNA Plasmid (m): sc-36723-SH, TRF1 shRNA (h) Lentiviral Particles: sc-36722-V and TRF1 shRNA (m) Lentiviral Particles: sc-36723-V.

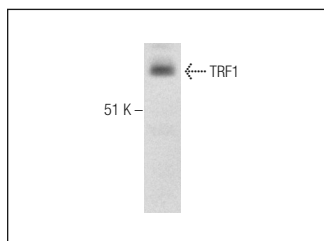
Molecular Weight of TRF1: 60 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204 or HeLa whole cell lysate: sc-2200.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



TRF1 (H-242): sc-5596. Western blot analysis of TRF1 expression in Jurkat whole cell lysate.

SELECT PRODUCT CITATIONS

1. Kim, S.H., et al. 2008. Telomere dysfunction and cell survival: roles for distinct TIN2-containing complexes. *J. Cell Biol.* 181: 447-460.
2. Brugat, T., et al. 2010. Telomere dysfunction-induced foci arise with the onset of telomeric deletions and complex chromosomal aberrations in resistant chronic lymphocytic leukemia cells. *Blood* 116: 239-249.
3. Kim, S.H., et al. 2010. Androgen receptor interacts with telomeric proteins in prostate cancer cells. *J. Biol. Chem.* 285: 10472-10476.

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.

PROTOCOLS

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



Try **TRF1 (G-7): sc-271485** or **TRF1 (TRF-78): sc-56807**, our highly recommended monoclonal alternatives to TRF1 (H-242).