

## TRF2 (H-300): sc-9143

### BACKGROUND

Telomeric repeat binding factor 1 (TERF1, PIN2, TRF1, TRBF1) and telomeric repeat binding factor 2 (TERF2, TRF2, 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 G<sub>0</sub> and S and diffuses out of the nucleolus in G<sub>2</sub> 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 (H-300) is a rabbit polyclonal antibody raised against amino acids 49-300 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.

### APPLICATIONS

TRF2 (H-300) 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), immunohistochemistry (including paraffin-embedded sections) (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 (H-300) is also recommended for detection of TRF2 in additional species, including canine, bovine and porcine.

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.

Molecular Weight of TRF2: 70 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, K-562 nuclear extract: sc-2130 or Jurkat nuclear extract: sc-2132.

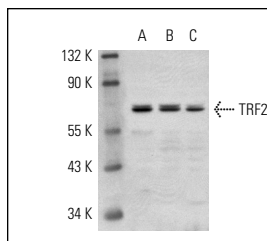
### STORAGE

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

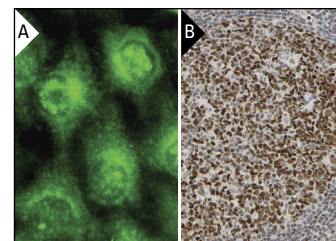
### RESEARCH USE

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

### DATA



TRF2 (H-300): sc-9143. Western blot analysis of TRF2 expression in HeLa (A), K-562 (B) and Jurkat (C) nuclear extracts.



TRF2 (H-300): sc-9143. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear and cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human lymph node tissue showing nuclear staining of lymphoid cells. Kindly provided by The Swedish Human Protein Atlas (HPA) program (B).

### SELECT PRODUCT CITATIONS

- Opresko, 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.
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- Sheng, R., et al. 2010. Epigallocatechin gallate protects H9c2 cardiomyoblasts against hydrogen dioxides- induced apoptosis and telomere attrition. *Eur. J. Pharmacol.* 641: 199-206.
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- Choi, K.H., et al. 2011. Characterization of the DNA binding specificity of Shelterin complexes. *Nucleic Acids Res.* 39: 9206-9223.

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