SANTA CRUZ BIOTECHNOLOGY, INC.

TRFP (h2): 293T Lysate: sc-117170

BACKGROUND

In mammalian cells, transcription is regulated in part by high molecular weight coactivating complexes that mediate signals between transcriptional activators and RNA polymerase. These complexes include SMCC (SRB and MED protein cofactor complex), which consists of various subunits that share homology with several components of the yeast transcriptional mediator complexes. SMCC associates with the RNAPII (RNA polymerase II) holoenzyme through Srb7 and, in turn, enhances gene-specific activation or repression induced by DNA-binding transcription factors. Srb7 also interacts with an additional member of the RNAPII holoenzyme, the human homolog of *Drosophila* TBP-related factor (TRF)-proximal protein (TRFP). TRFP synergistically associates with coactivators, including PC4 (positive coactivator 4) and USA (upstream stimulatory activity) of the RNAPII and SMCC complex, to enhance basal and gene-specific transcription.

REFERENCES

1. Aragona, M., et al. 2000. Immunohistochemical telomeric-repeat binding factor-1 expression in gastrointestinal tumors. Oncol. Rep. 7: 987-990.
2. Matsutani, N., et al. 2001. Expression of telomeric repeat binding factor 1 and 2 and TRF1-interacting nuclear protein 2 in human gastric carcinomas. Int. J. Oncol. 19: 507-512.
3. Yajima, T., et al. 2001. Telomerase reverse transcriptase and telomeric-repeat binding factor protein 1 as regulators of telomerase activity in pancreatic cancer cells. Br. J. Cancer 85: 752-757.
4. Seimiya, H., et al. 2002. The telomeric poly (ADP-ribose) polymerase, tankyrase 1, contains multiple binding sites for telomeric repeat binding factor 1 (TRF1) and a novel acceptor, 182 kDa tankyrase-binding protein (TAB182). J. Biol. Chem. 277: 14116-14126.
5. Nakanishi, K., et al. 2003. Expression of mRNAs for telomeric repeat binding factor (TRF)-1 and TRF2 in atypical adenomatous hyperplasia and adenocarcinoma of the lung. Clin. Cancer Res. 9: 1105-1111.
6. Yang, S.W., et al. 2003. Expression of the telomeric repeat binding factor gene NgTRF1 is closely coordinated with the cell division program in tobacco BY-2 suspension culture cells. J. Biol. Chem. 278: 21395-21407.
7. Zhang, S., et al. 2004. Nucleolar localization of the human telomeric repeat binding factor 2 (TRF2). J. Cell Sci. 117: 3935-3945.
8. La Torre, D., et al. 2005. Expression of telomeric repeat binding factor-1 in astroglial brain tumors. Neurosurgery 56: 802-810.

CHROMOSOMAL LOCATION

Genetic locus: USP49 (human) mapping to 6p21.1.

PRODUCT

TRFP (h2): 293T Lysate represents a lysate of human TRFP transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

TRFP (h2): 293T Lysate is suitable as a Western Blotting positive control for human reactive TRFP antibodies. Recommended use: 10-20 µl per lane.

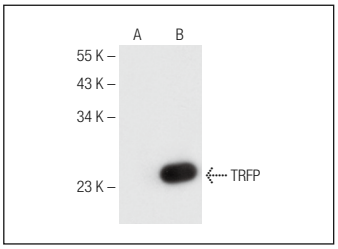
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

TRFP (G-11): sc-374247 is recommended as a positive control antibody for Western Blot analysis of enhanced human TRFP expression in TRFP transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

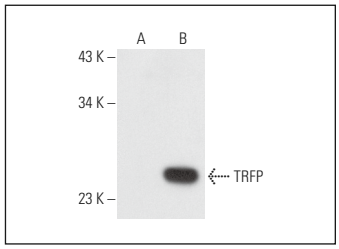
RECOMMENDED SUPPORT REAGENTS

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.

DATA



TRFP (G-11): sc-374247. Western blot analysis of TRFP expression in non-transfected: sc-117752 (**A**) and human TRFP transfected: sc-117170 (**B**) 293T whole cell lysates.



TRFP (B-10): sc-166564. Western blot analysis of TRFP expression in non-transfected: sc-117752 (**A**) and human TRFP transfected: sc-117170 (**B**) 293T whole cell lysates.

RESEARCH USE

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

PROTOCOLS

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