SANTA CRUZ BIOTECHNOLOGY, INC.

TTF (24): sc-136371

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The transcription termination factor TTF (RNA polymerase I, TTF1, TTF-I) exerts two functions in ribosomal gene (rDNA) transcription: facilitating initiation and mediating termination of transcription. Sequence-specific termination of DNA replication within mammalian ribosomal RNA genes is catalyzed by a DNA-protein complex that includes TTF. Mammalian ribosomal genes are flanked at their 5' and 3' ends by terminator sequences which are recognized by the transcription termination factor TTF. In HeLa cells, TTF protein co-localizes with the active transcription machinery in the nucleolus and also with the inactive machinery present in certain mitotic nucleolar organizer regions (NORs) when rDNA transcription is repressed.

REFERENCES

1. Kuhn, A., et al. 1990. Specific interaction of the murine transcription termination factor TTF I with class-I RNA polymerases. Nature 344: 559-562.
2. Evers, R., et al. 1995. Molecular coevolution of mammalian ribosomal gene terminator sequences and the transcription termination factor TTF-I. Proc. Natl. Acad. Sci. USA 92: 5827-5831.
3. Sander, E.E., et al. 1996. The amino-terminal domain of the transcription termination factor TTF-I causes protein oligomerization and inhibition of DNA binding. Nucleic Acids Res. 24: 3677-3684.
4. Gerber, J.K., et al. 1997. Termination of mammalian rDNA replication: polar arrest of replication fork movement by transcription termination factor TTF-I. Cell 90: 559-567.

CHROMOSOMAL LOCATION

Genetic locus: TTF1 (human) mapping to 9q34.13.

SOURCE

TTF (24) is a mouse monoclonal antibody raised against amino acids of TTF of human origin 260-379.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

TTF (24) is available conjugated to agarose (sc-136371 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-136371 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-136371 PE), fluorescein (sc-136371 FITC), Alexa Fluor® 488 (sc-136371 AF488), Alexa Fluor® 594 (sc-136371 AF594) or Alexa Fluor® 647 (sc-136371 AF647), 200 µg/ml, for IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-136371 AF680) or Alexa Fluor® 790 (sc-136371 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

TTF (24) is recommended for detection of TTF of 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 TTF siRNA (h): sc-38602, TTF shRNA Plasmid (h): sc-38602-SH and TTF shRNA (h) Lentiviral Particles: sc-38602-V.

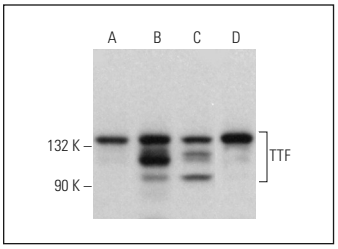
Molecular Weight of TTF: 105 kDa.

Positive Controls: CCRF-CEM cell lysate: sc-2225, Jurkat whole cell lysate: sc-2204 or MOLT-4 cell lysate: sc-2233.

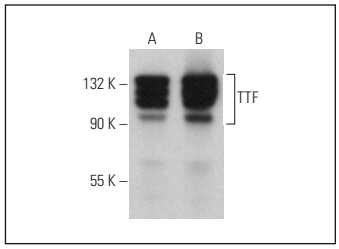
RECOMMENDED SUPPORT REAGENTS

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



TTF (24): sc-136371. Western blot analysis of TTF expression in A549 (**A**), Jurkat (**B**), CCRF-CEM (**C**) and NTERA-2 cl.D1 (**D**) whole cell lysates.



TTF (24): sc-136371. Western blot analysis of TTF expression in Jurkat (**A**) and MOLT-4 (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Zhang, Y., et al. 2011. Identification of DHX33 as a mediator of rRNA synthesis and cell growth. Mol. Cell. Biol. 31: 4676-4691.
2. Smith, C.L., et al. 2014. A separable domain of the p150 subunit of human chromatin assembly factor-1 promotes protein and chromosome associations with nucleoli. Mol. Biol. Cell 25: 2866-2881.

RESEARCH USE

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

PROTOCOLS

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