SANTA CRUZ BIOTECHNOLOGY, INC.

TTF (N-20): sc-17694

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 colocalizes 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. Langst, G., et al. 1997. RNA polymerase I transcription on nucleosomal templates: the transcription termination factor TTF-I induces chromatin remodeling and relieves transcriptional repression. EMBO J. 16: 760-768.
5. Sander, E.E., et al. 1997. Oligomerization of the transcription termination factor TTF-I: implications for the structural organization of ribosomal transcription units. Nucleic Acids Res. 25: 1142-1147.
6. 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.
7. Sirri, V., et al. 1999. The mitotically phosphorylated form of the transcription termination factor TTF-1 is associated with the repressed rDNA transcription machinery. J. Cell. Sci. 112 (Part 19): 3259-3268.
8. Putter, V., et al. 2002. Transcription termination factor TTF-I exhibits contrahelicase activity during DNA replication. EMBO Rep. 3: 147-152.
9. Wallisch, M., et al. 2002. Ku antigen supports termination of mammalian rDNA replication by transcription termination factor TTF-I. Biol. Chem. 383: 765-771.

CHROMOSOMAL LOCATION

Genetic locus: TTF1 (human) mapping to 14q13; Ttf1 (mouse) mapping to 2 A3.

SOURCE

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

RESEARCH USE

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

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-17694 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

TTF (N-20) is recommended for detection of TTF of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

Suitable for use as control antibody for TTF siRNA (h): sc-38602.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

STORAGE

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

PROTOCOLS

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