SANTA CRUZ BIOTECHNOLOGY, INC.

TFIIIC102 (N-14): sc-17466

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The Power to Question

BACKGROUND

RNA polymerase (pol) III synthesizes tRNA, 5s rRNA, 7SL RNA and U6 snRNA and is overexpressed in many transformed cell lines and tumors *in vivo,* since cells must duplicate its protein components before division. Therefore, in order to maintain rapid growth, cells must produce a high level of Pol III transcribed RNA, which requires the presence of the TFIIIB and TFIIIC2 transcription factor complexes. The TFIIIC2 complex is composed of five subunits, TFIIIC220, TFIIIC110, TFIIIC102, TFIIIC90 and TFIIIC63, that are overexpressed in adenovirus transformed cells as well as in malignant cells *in vivo,* such as ovarian carcinomas. TFIIIC2 recruits RNA pol III and TFIIIB to promoter elements and may be a key component in the deregulation of malignant cells. The TFIIIB complex includes the TATA-binding protein (TBP), TFIIB-related factor 1 (BRF1) and TFIIIB, the expression of which are also upregulated in transformed cells. In many carcinomas, the tumor suppressors retinoblastoma (RB) and p53 are inactivated, which affects their ability to bind and inactivate the function of TFIIIB.

REFERENCES

1. Scott, M.R., et al. 1983. Activation of mouse genes in transformed cells. Cell 34: 557-567.
2. Chen, W., et al. 1997. Expression of neural BC1 RNA: induction in murine tumours. Eur. J. Cancer 33: 288-292.
3. Hsieh, Y.J., et al. 1999. The TFIIIC90 subunit of TFIIIC interacts with multiple components of the RNA polymerase III machinery and contains a histone-specific acetyltransferase activity. Mol. Cell. Biol. 19: 7697-7704.
4. Winter, A.G., et al. 2000. RNA polymerase III transcription factor TFIIIC2 is overexpressed in ovarian tumors. Proc. Natl. Acad. Sci. USA 97: 12619-12624.

CHROMOSOMAL LOCATION

Genetic locus: GTF3C3 (human) mapping to 2q33.1; Gtf3c3 (mouse) mapping to 1 C1.1.

SOURCE

TFIIIC102 (N-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of TFIIIC102 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.

Blocking peptide available for competition studies, sc-17466 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-17466 X, 200 µg/0.1 ml.

STORAGE

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

APPLICATIONS

TFIIIC102 (N-14) is recommended for detection of TFIIIC102 of mouse, rat and 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), 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).

TFIIIC102 (N-14) is also recommended for detection of TFIIIC102 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for TFIIIC102 siRNA (h): sc-38540, TFIIIC102 siRNA (m): sc-38541, TFIIIC102 shRNA Plasmid (h): sc-38540-SH, TFIIIC102 shRNA Plasmid (m): sc-38541-SH, TFIIIC102 shRNA (h) Lentiviral Particles: sc-38540-V and TFIIIC102 shRNA (m) Lentiviral Particles: sc-38541-V.

TFIIIC102 (N-14) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

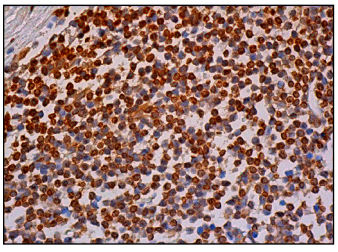
Molecular Weight of TFIIIC102: 102 kDa.

Positive Controls: BJAB nuclear extract: sc-2145, RAW 264.7 nuclear extract: sc-24961 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 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. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



TFIIIC102 (N-14): sc-17466. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lymph node tissue showing nuclear staining of cells in non-germinal centers.

RESEARCH USE

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