SANTA CRUZ BIOTECHNOLOGY, INC.

TFII-I (N-18): sc-9944

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Initiation of transcription of eukaryotic genes requires the association of large multimeric protein complexes that involve RNA polymerase II and a variety of basal transcription factors, including members of the TFII protein family. TFII proteins complex with Pol II and initiate transcription by binding to the core promoter elements, such as TATA box sequences, that are located upstream of the transcription start codon. A member of the TFII family, TFII-I is regulated by tyrosine phophorylation, and it is involved in the initiation of transcription of TATA-less promoters and in cell type specific transcription. TFII-I directly associates with several promoters elements, including TATA box, pyrimidine-rich initiator (Inr) and E-box elements. TFII-I is also implicated in activating transcription of the transcription factor c-Fos, a downstream effector protein in the MAP kinase-signaling pathway. TFII-I binds to several initiation sites within the c-Fos promoter, and it is phosphorylated in response to MAP kinase activation, which then enhances TFII-I induced expression of c-Fos.

REFERENCES

1. Conaway, R.C., et al. 1989. An RNA polymerase II transcription factor has an associated DNA-dependent ATPase (dATPase) activity strongly stimulated by the TATA region of promoters. Proc. Natl. Acad. Sci. USA 86: 7356-7360.
2. Roy, A.L., et al. 1993. An alternative pathway for transcription initiation involving TFII-I. Nature 365: 355-359.
3. Holstege, F.C., et al. 1998. Dissecting the regulatory circuitry of a eukaryotic genome. Cell 95: 717-728.
4. Majello, B., et al. 1998. Recruitment of human TBP selectively activates RNA polymerase II TATA-dependent promoters. J. Biol. Chem. 273: 16509-16516.

CHROMOSOMAL LOCATION

Genetic locus: GTF2I (human) mapping to 7q11.23; Gtf2i (mouse) mapping to 5 G2.

SOURCE

TFII-I (N-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of TFII-I 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-9944 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-9944 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

TFII-I (N-18) is recommended for detection of short and long forms of TFII-I 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).

TFII-I (N-18) is also recommended for detection of short and long forms of TFII-I in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for TFII-I siRNA (h): sc-36643, TFII-I siRNA (m): sc-36644, TFII-I shRNA Plasmid (h): sc-36643-SH, TFII-I shRNA Plasmid (m): sc-36644-SH, TFII-I shRNA (h) Lentiviral Particles: sc-36643-V and TFII-I shRNA (m) Lentiviral Particles: sc-36644-V.

TFII-I (N-18) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

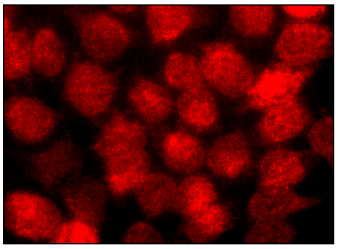
Molecular Weight of TFII-I isoforms: 120/128 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, Jurkat nuclear extract: sc-2132 or NAMALWA cell lysate: sc-2234.

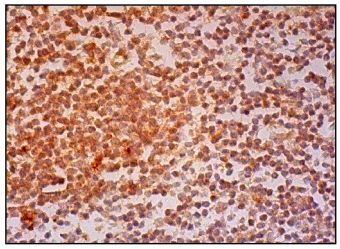
RECOMMENDED SECONDARY REAGENTS

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



TFII-I (N-18): sc-9944. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization.



TFII-I (N-18): sc-9944. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lymph node tissue showing nuclear and cytoplasmic staining of cells in germinal centers and cells in non-germinal centers.

RESEARCH USE

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