

## TFII-I (42): sc-136099

### 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 phosphorylation, 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 promoter 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

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- Roy, A.L., et al. 1993. An alternative pathway for transcription initiation involving TFII-I. *Nature* 365: 355-359.
- Holstege, F.C., et al. 1998. Dissecting the regulatory circuitry of a eukaryotic genome. *Cell* 95: 717-728.
- Majello, B., et al. 1998. Recruitment of human TBP selectively activates RNA polymerase II TATA-dependent promoters. *J. Biol. Chem.* 273: 16509-16516.
- Novina, C.D., et al. 1998. Regulation of TFII-I activity by phosphorylation. *J. Biol. Chem.* 273: 33443-33448.
- Kim, D.W., et al. 1998. TFII-I enhances activation of the c-Fos promoter through interactions with upstream elements. *Mol. Cell. Biol.* 18: 3310-3320.
- Cheriyath, V., et al. 1998. TFII-I regulates Vbeta promoter activity through an initiator element. *Mol. Cell. Biol.* 18: 4444-4454.

### CHROMOSOMAL LOCATION

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

### SOURCE

TFII-I (42) is a mouse monoclonal antibody raised against amino acids 17-123 of TFII-I of human origin.

### PRODUCT

Each vial contains 50  $\mu$ g IgG<sub>1</sub> in 0.5 ml of PBS with < 0.1% sodium azide, 0.1% gelatin, 20% glycerol and 0.04% stabilizer protein.

### APPLICATIONS

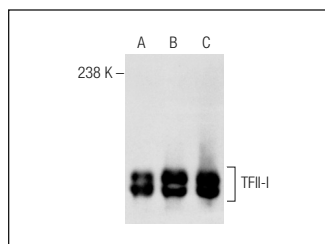
TFII-I (42) is recommended for detection of TFII-I of mouse, rat, human and canine origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for 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.

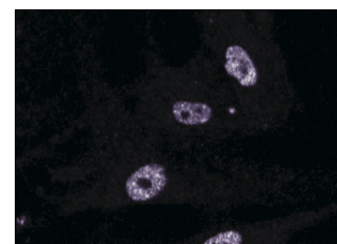
Molecular Weight of TFII-I isoforms: 120/128 kDa.

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

### DATA



TFII-I (42): sc-136099. Western blot analysis of TFII-I expression in HeLa (A) and Jurkat (B) nuclear extracts and NAMALWA whole cell lysates (C).



TFII-I (42): sc-136099. Immunofluorescence staining of FHS cells showing nuclear localization.

### STORAGE

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

### RESEARCH USE

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

### PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.