SANTA CRUZ BIOTECHNOLOGY, INC.

TFIID (h): 293T Lysate: sc-111938

BACKGROUND

In eukaryotic systems, initiation of transcription from protein-coding genes is a complex process requiring RNA polymerase II and broad families of auxiliary transcription factors. Such factors can be divided into two major functional classes: the basal factors that are required for transcription of all Pol II genes, including TFIIA, TFIIB, TFIID, TFIIE, TFIIF and TFIIH; and sequence-specific factors that regulate gene expression. The basal transcription factors and Pol II form a specific multiprotein complex near the transcription start site by interacting with core promotor elements such as the TATA box generally located 25-30 base pairs upstream of the transcription start site. Binding of TFIID to the TATA element initiates assembly of the other factors into a pre-initiation complex. The TATA-binding subunit of TFIID (designated TFIIDt or TBP) from higher eukaryotes contains a highly conserved 180 amino acid C-terminal domain.

REFERENCES

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2. Peterson, M.G., et al. 1991. Structure and functional properties of human general transcription factor IIE. Nature 354: 369-373.
3. Lee, D.K., et al. 1992. TFIIA induces conformational changes in TFIID via interactions with the basic repeat. Mol. Cell. Biol. 12: 5189-5196.
4. Takada, R., et al. 1992. Identification of human TFIID components and direct interaction between a 250 kDa polypeptide and the TATA box-binding protein (TFIIDt). Proc. Natl. Acad. Sci. USA 89: 11809-11813.
5. Huisinga, K.L., et al. 2007. A TATA-binding protein regulatory network that governs transcription complex assembly. Genome Biol. 8: R46.
6. Romier, C., et al. 2007. Crystal structure, biochemical and genetic characterization of yeast and *E. cuniculi* TAF(II)5 N-terminal domain: implications for TFIID assembly. J. Mol. Biol. 368: 1292-1306.
7. Demeny, M.A., et al. 2007. Identification of a small TAF complex and its role in the assembly of TAF-containing complexes. PLoS ONE 2: e316.
8. Holloway, K., et al. 2007. Action of transcription factors in the control of transferrin receptor expression in human brain endothelium. J. Mol. Biol. 365: 1271-1284.
9. Bhattacharya, S., et al. 2007. Structural analysis and dimerization potential of the human TAF5 subunit of TFIID. Proc. Natl. Acad. Sci. USA 104: 1189-1194.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: TBP (human) mapping to 6q27.

PRODUCT

TFIID 2 (h): 293T Lysate represents a lysate of human TFIID 2 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

TFIID 2 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive TFIID 2 antibodies. Recommended use: 10-20 µl per lane.

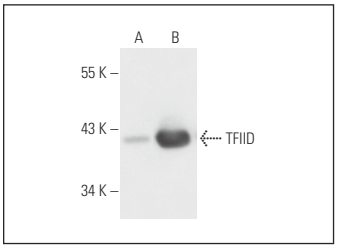
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

TFIID (1TB18): sc-56794. is recommended as a positive control antibody for Western Blot analysis of enhanced human TFIID 2 expression in TFIID 2 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

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.

DATA



TFIID (1TB18): sc-56794. Western blot analysis of TFIID expression in non-transfected: sc-117752 (**A**) and human TFIID transfected: sc-111938 (**B**) 293T whole cell lysates.

RESEARCH USE

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