TFIID (m2): 293T Lysate: sc-124002



The Power to Overtin

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

- Maldonado, E., et al. 1990. Factors involved in specific transcription by mammalian RNA polymerase II: role of transcription factors IIA, IID, and IIB during formation of a transcription-competent complex. Mol. Cell. Biol. 10: 6335-6347.
- 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 (TFIID τ). 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.
- 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. 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.
- 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.

CHROMOSOMAL LOCATION

Genetic locus: Tbp (mouse) mapping to 17 A2.

PRODUCT

TFIID (m2): 293T Lysate represents a lysate of mouse TFIID transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

TFIID (m2): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive TFIID antibodies. Recommended use: $10-20~\mu$ l per lane.

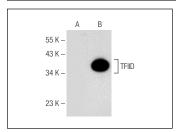
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

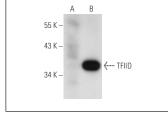
TFIID (C-8): sc-374035 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse TFIID expression in TFIID transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-lgG κ BP-HRP: sc-516102 or m-lgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz MarkerTM Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA





TFIID (C-8): sc-374035. Western blot analysis of TFIID expression in non-transfected: sc-117752 (**A**) and mouse TFIID transfected: sc-124002 (**B**) 293T whole

TFIID (C-7): sc-271146. Western blot analysis of TFIID expression in non-transfected: sc-117752 (**A**) and mouse TFIID transfected: sc-124002 (**B**) 293T whole cell heater

STORAGE

Store at -20 $^{\circ}$ C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

RESEARCH USE

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

PROTOCOLS

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

Santa Cruz Biotechnology, Inc. 1.800.457.3801 831.457.3801 Fax 831.457.3801 Europe +00800 4573 8000 49 6221 4503 0 www.scbt.com