TFIID (86.3): sc-135803



The Power to Question

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, TFIIB, 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.
- 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.
- Takada, R., et al. 1992. Identification of human TFIID components and direct interaction between a 250 kDa polypeptide and the TATA boxbinding 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.
- 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.
- 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.
- 8. 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.

CHROMOSOMAL LOCATION

Genetic locus: TBP (human) mapping to 6q27; Tbp (mouse) mapping to 17 A2.

SOURCE

TFIID (86.3) is a mouse monoclonal antibody raised against recombinant TFIID of mouse origin.

PRODUCT

Each vial contains 200 μg lgG_1 in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-135803 X, 200 $\mu g/0.1$ ml.

APPLICATIONS

TFIID (86.3) is recommended for detection of TFIID of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for TFIID siRNA (h): sc-29503, TFIID siRNA (m): sc-36648, TFIID shRNA Plasmid (h): sc-29503-SH, TFIID shRNA Plasmid (m): sc-36648-SH, TFIID shRNA (h) Lentiviral Particles: sc-29503-V and TFIID shRNA (m) Lentiviral Particles: sc-36648-V.

TFIID (86.3) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

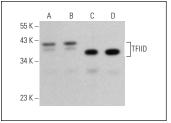
Molecular Weight of TFIID: 36 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, F9 cell lysate: sc-2245 or NIH/3T3 whole cell lysate: sc-2210.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



TFIID (86.3): sc-135803. Western blot analysis of TFIID expression in HL-60 ($\bf A$), K-562 ($\bf B$), F9 ($\bf C$) and NIH/3T3 ($\bf D$) whole cell lysates.

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.



See **TFIID (TBP) (58C9): sc-421** for TFIID antibody conjugates, including AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647.