

TFIID [TBP] (58C9): sc-421

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, TFII E, TFII F and TFII H; 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 promoter 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.

CHROMOSOMAL LOCATION

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

SOURCE

TFIID [TBP] (58C9) is a mouse monoclonal antibody raised against bacterially produced dTBP.

PRODUCT

Each vial contains 200 µg IgG_{2b} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-421 X, 200 µg/0.1 ml.

TFIID [TBP] (58C9) is available conjugated to agarose (sc-421 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-421 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-421 PE), fluorescein (sc-421 FITC), Alexa Fluor[®] 488 (sc-421 AF488), Alexa Fluor[®] 546 (sc-421 AF546), Alexa Fluor[®] 594 (sc-421 AF594) or Alexa Fluor[®] 647 (sc-421 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-421 AF680) or Alexa Fluor[®] 790 (sc-421 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

TFIID [TBP] (58C9) is recommended for detection of TATA binding protein (TBP) of mouse, rat, human and *Drosophila melanogaster* origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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 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 [TBP] (58C9) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

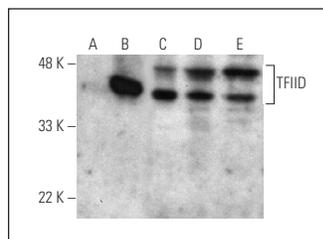
Molecular Weight of TFIID: 36 kDa.

Positive Controls: TFIID (m2): 293T Lysate: sc-124002, NIH/3T3 whole cell lysate: sc-2210 or F9 cell lysate: sc-2245.

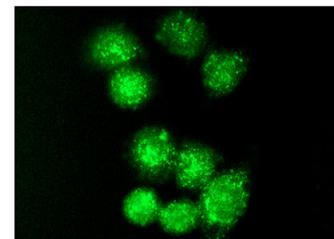
STORAGE

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

DATA



TFIID [TBP] (58C9) HRP: sc-421 HRP. Direct western blot analysis of TFIID expression in non-transfected 293T: sc-117752 (A), mouse TFIID transfected 293T: sc-124002 (B), F9 (C), NIH/3T3 (D) and Sol8 (E) whole cell lysates.



TFIID [TBP] (58C9): sc-421. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization.

SELECT PRODUCT CITATIONS

- Schmidt, E.E. and Schibler, U. 1995. High accumulation of components of the RNA polymerase II transcription machinery in rodent spermatids. *Development* 121: 2373-2383.
- Zaborowska, J., et al. 2012. Mar-Apr. A novel TBP-TAF complex on RNA polymerase II-transcribed snRNA genes. *Transcription* 3: 92-104.
- McClellan, M.J., et al. 2013. Modulation of enhancer looping and differential gene targeting by Epstein-Barr virus transcription factors directs cellular reprogramming. *PLoS Pathog.* 9: e1003636.
- Peng, J., et al. 2016. The BMP signaling pathway leads to enhanced proliferation in serous ovarian cancer-A potential therapeutic target. *Mol. Carcinog.* 55: 335-345.
- Castella, B., et al. 2017. The ATP-binding cassette transporter A1 regulates phosphoantigen release and Vγ9Vδ2 T cell activation by dendritic cells. *Nat. Commun.* 8: 15663.
- Helfenberger, K.E., et al. 2018. Subcellular distribution of ERK phosphorylation in tyrosine and threonine depends on redox status in murine lung cells. *PLoS ONE* 13: e0193022.
- Lee, J.W., et al. 2019. RUNX3 regulates cell cycle-dependent chromatin dynamics by functioning as a pioneer factor of the restriction-point. *Nat. Commun.* 10: 1897.
- Long, Y., et al. 2020. RNA is essential for PRC2 chromatin occupancy and function in human pluripotent stem cells. *Nat. Genet.* 52: 931-938.
- Sasagawa, T., et al. 2021. Hypoxia-inducible factor-1β is essential for upregulation of the hypoxia-induced FLT1 gene in placental trophoblasts. *Mol. Hum. Reprod.* E-published.

RESEARCH USE

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

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