SANTA CRUZ BIOTECHNOLOGY, INC.

TAF II p135 (22): sc-136093

BACKGROUND

TFIID is a general transcription factor that initiates preinitiation complex assembly through direct interaction with the TATA promoter element. Functioning as a multisubunit complex consisting of a small TATA-binding polypeptide and other TBP-associated factors (TAFs), TFIID mediates promoter responses to various transcriptional activators and repressors. TAF II p135, also known as TAF4, TAF2C, TAF2C1, TAF4A or TAFII130, is a 1,085 amino acid subunit of TFIID that accelerates transcriptional activation triggered by thyroid hormone (TR) or retinoic acid (RA). Localized to the nucleus, TAF II p135 contains one TAFH domain and is thought to bind to proteins that contain glutamine-rich domains, such as the transcription factor CREB. Via its binding to glutamine-rich proteins, TAF II p135 may be associated with neurodegenerative polyglutamine diseases, such as DRPLA (dentatorubropallidoluysian atrophy), HD (Huntington's disease) and SCA (spinocerebellar ataxia).

REFERENCES

1. Werten, S., et al. 2002. Crystal structure of a subcomplex of human transcription factor TFIID formed by TATA binding protein-associated factors hTAF4 (hTAF(II)135) and hTAF12 (hTAF(II)20). J. Biol. Chem. 277: 45502-45509.
2. Vassallo, M.F. and Tanese, N. 2002. Isoform-specific interaction of HP1 with human TAFII130. Proc. Natl. Acad. Sci. USA 99: 5919-5924.

CHROMOSOMAL LOCATION

Genetic locus: TAF4 (human) mapping to 20q13.33; Taf4a (mouse) mapping to 2 H4.

SOURCE

TAF II p135 (22) is a mouse monoclonal antibody raised against amino acids 454-565 of TAF II p135 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

TAF II p135 (22) is recommended for detection of TAF II p135 of mouse, rat and human 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 TAF II p135 siRNA (h): sc-76626, TAF II p135 siRNA (m): sc-154046, TAF II p135 shRNA Plasmid (h): sc-76626-SH, TAF II p135 shRNA Plasmid (m): sc-154046-SH, TAF II p135 shRNA (h) Lentiviral Particles: sc-76626-V and TAF II p135 shRNA (m) Lentiviral Particles: sc-154046-V.

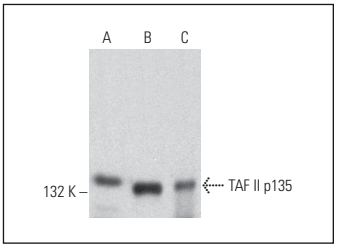
Molecular Weight of TAF II p135: 135 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, ES-D3 whole cell lysate: sc-364776 or mouse ovary extract: sc-2404.

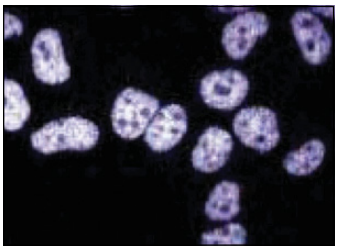
STORAGE

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

DATA



TAF II p135 (22): sc-136093. Western blot analysis of TAF II p135 expression in HeLa nuclear extract (**A**), ES-D3 whole cell lysate (**B**) and mouse ovary tissue extract (**C**).



TAF II p135 (22): sc-136093. Immunofluorescence staining of HeLa cells showing nuclear staining.

SELECT PRODUCT CITATIONS

1. Gegonne, A., et al. 2012. The general transcription factor TAF7 is essential for embryonic development but not essential for the survival or differentiation of mature T cells. Mol. Cell. Biol. 32: 1984-1997.
2. Alpern, D., et al. 2014. TAF4, a subunit of transcription factor II D, directs promoter occupancy of nuclear receptor HNF4A during post-natal hepatocyte differentiation. Elife 3: e03613.
3. Langer, D., et al. 2016. Essential role of the TFIID subunit TAF4 in murine embryogenesis and embryonic stem cell differentiation. Nat. Commun. 7: 11063.
4. Wang, J., et al. 2017. A transcription factor IIA-binding site differentially regulates RNA polymerase II-mediated transcription in a promoter context-dependent manner. J. Biol. Chem. 292: 11873-11885.
5. Xu, M., et al. 2018. SHMT2 and the BRCC36/BRISC deubiquitinase regulate HIV-1 Tat K63-ubiquitylation and destruction by autophagy. PLoS Pathog. 14: e1007071.
6. Huang, L., et al. 2019. A novel method to investigate the effects of gene mutations at the cellular level using a dual expression lentiviral vector. Biosci. Rep. 39: BSR20182383.
7. Kleiber, T., et al. 2021. Single cell transcriptomics reveal trans-differentiation of pancreatic b cells following inactivation of the TFIID subunit Taf4. Cell Death Dis. 12: 790.
8. Santana, J.F., et al. 2022. Differential dependencies of human RNA polymerase II promoters on TBP, TAF1, TFIIB and XPB. Nucleic Acids Res. 50: 9127-9148.
9. Kwan, J.Z.J., et al. 2023. RNA polymerase II transcription independent of TBP in murine embryonic stem cells. Elife 12: e83810

RESEARCH USE

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