SANTA CRUZ BIOTECHNOLOGY, INC.

TFIIB (C-18): sc-225

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. Template commitment is established by the initial binding of TFIID to the "TATA" element of the promotor, a step which may be facilitated by TFIIA. TFIIB then acts as the bridge between TFIID and RNA polymerase II.

CHROMOSOMAL LOCATION

Genetic locus: GTF2B (human) mapping to 1p22.2; Gtf2b (mouse) mapping to 3 H1.

SOURCE

TFIIB (C-18) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the C-terminus of TFIIB of human origin.

PRODUCT

Each vial contains 200 µg IgG 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-225 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-225 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

TFIIB (C-18) is recommended for detection of TFIIB p33 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)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), flow cytometry (1 µg per 1 x 10^6 cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

TFIIB (C-18) is also recommended for detection of TFIIB p33 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for TFIIB siRNA (h): sc-29502, TFIIB siRNA (m): sc-36647, TFIIB shRNA Plasmid (h): sc-29502-SH, TFIIB shRNA Plasmid (m): sc-36647-SH, TFIIB shRNA (h) Lentiviral Particles: sc-29502-V and TFIIB shRNA (m) Lentiviral Particles: sc-36647-V.

TFIIB (C-18) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of TFIIB: 38 kDa.

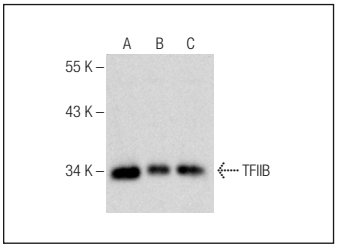
RESEARCH USE

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

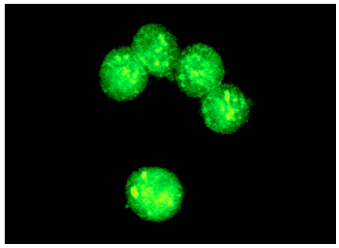
STORAGE

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

DATA



TFIIB (C-18): sc-225. Western blot analysis of TFIIB expression in Jurkat (**A**), K-562 (**B**) and A-431 (**C**) nuclear extracts.



TFIIB (C-18): sc-225. Immunofluorescence staining of methanol-fixed K-562 cells showing nuclear staining.

SELECT PRODUCT CITATIONS

1. Lu, W., et al. 2000. Influence of HMG-1 and adenovirus oncoprotein E1A on early stages of transcriptional preinitiation complex assembly. J. Biol. Chem. 275: 35006-35012.
2. Yang, J., et al. 2012. Transcription initiation factor IIB involves in Schwann cell differentiation after rat sciatic nerve crush. J. Mol. Neurosci. 49: 491-498.
3. Siersbæk, M.S., et al. 2012. Genome-wide profiling of peroxisome proliferator-activated receptor γ in primary epididymal, inguinal, and brown adipocytes reveals depot-selective binding correlated with gene expression. Mol. Cell. Biol. 32: 3452-3463.
4. Kelso, T.W., et al. 2014. Cyclin-dependent kinase 7 controls mRNA synthesis by affecting stability of preinitiation complexes, leading to altered gene expression, cell cycle progression, and survival of tumor cells. Mol. Cell. Biol. 34: 3675-3688.
5. 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.
6. Susuki-Miyata, S., et al. 2015. Cross-talk between PKA-Cβ and p65 mediates synergistic induction of PDE4B by roflumilast and NTHi. Proc. Natl. Acad. Sci. USA 112: E1800-E1809.
7. Albert, T.K., et al. 2016. The establishment of a hyperactive structure allows the tumour suppressor protein p53 to function through P-TEFβ during limited CDK9 kinase inhibition. PLoS ONE 11: e0146648.