SANTA CRUZ BIOTECHNOLOGY, INC.

TFIIB (D-12): sc-271784

SANTA CRUZ BIOTECHNOLOGY

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, 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 (D-12) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 289-318 near the C-terminus of TFIIB of human origin.

PRODUCT

Each vial contains 200 µg IgM kappa light chain 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-271784 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-271784 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

TFIIB (D-12) is recommended for detection of TFIIB p33 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

TFIIB (D-12) is also recommended for detection of TFIIB p33 in additional species, including canine, bovine and porcine.

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 (D-12) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

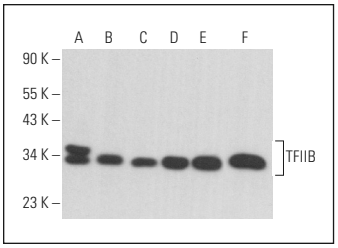
Molecular Weight of TFIIB: 38 kDa.

Positive Controls: SUP-T1 whole cell lysate: sc-364796, WEHI-231 whole cell lysate: sc-2213 or c4 whole cell lysate: sc-364186.

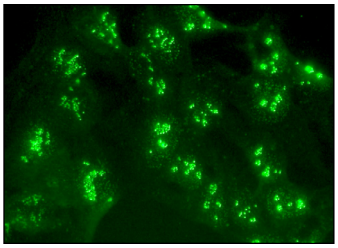
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



TFIIB (D-12): sc-271784. Western blot analysis of TFIIB expression in Jurkat (**A**), HEL 92.1.7 (**B**), c4 (**C**), WR19L (**D**), WEHI-231 (**E**) and SUP-T1 (**F**) whole cell lysates.



TFIIB (D-12): sc-271784. Immunofluorescence staining of formalin-fixed Hep G2 cells showing nucleolar localization.

SELECT PRODUCT CITATIONS

1. Venza, M., et al. 2015. The overriding of TRAIL resistance by the histone deacetylase inhibitor MS-275 involves c-Myc up-regulation in cutaneous, uveal, and mucosal melanoma. Int. Immunopharmacol. 28: 313-321.
2. Fernández-Moriano, C., et al. 2017. Evaluation of the adaptogenic potential exerted by ginsenosides Rb1 and Rg1 against oxidative stress-mediated neurotoxicity in an *in vitro* neuronal model. PLoS ONE 12: e0182933.
3. Fernández-Moriano, C., et al. 2017. *In vitro* neuroprotective potential of lichen metabolite fumarprotocetraric acid via intracellular redox modulation. Toxicol. Appl. Pharmacol. 316: 83-94.
4. Fernández-Moriano, C., et al. 2017. Protective effects of lichen metabolites evernic and usnic acids against redox impairment-mediated cytotoxicity in central nervous system-like cells. Food Chem. Toxicol. 105: 262-277.

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.

PROTOCOLS

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