

# TFIIB (D-12): sc-271784



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, TFII E, TFIIF and TFIIFH; 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. Template commitment is established by the initial binding of TFIID to the "TATA" element of the promoter, 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.

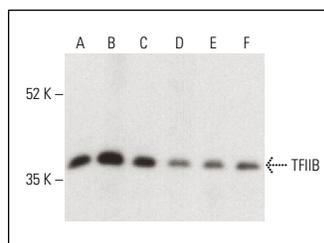
Molecular Weight of TFIIB: 38 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, HEL 92.1.7 cell lysate: sc-2270 or c4 whole cell lysate: sc-364186.

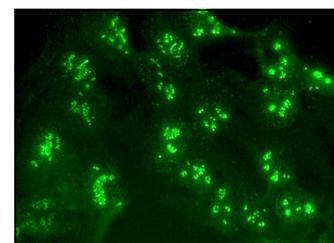
## RECOMMENDED SUPPORT REAGENTS

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 SUP-T1 (A), HEL 92.1.7 (B), Jurkat (C), K-562 (D), WR19L (E) and c4 (F) whole cell lysates. Detection reagent used: m-IgGκ BP-HRP: sc-516102.



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

## SELECT PRODUCT CITATIONS

- 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.
- 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.
- 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.
- 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.
- Bermúdez, G., et al. 2023. Long noncoding RNA TALAM1 is a transcriptional target of the RUNX2 transcription factor in lung adenocarcinoma. *Curr. Issues Mol. Biol.* 45: 7075-7086.

## 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.