SANTA CRUZ BIOTECHNOLOGY, INC.

TLF (C-16): sc-10105

BACKGROUND

The TATA box-binding protein (TBP) is an essential component of the basal transcriptional machinery. TBP and the various RNA polymerase subunits are assembled with unique TBP-associated factors (TAFs) into distinct complexes that act specifically with either RNA polymerase I (SL1/TIF-IB), RNA polymerase II (TFIID), or RNA polymerase III (TFIIIB) on cognate promoters. TLF (also called TBP-related factor 2 [TRF2]) activates a number of different genes, including the neurofibromatosis type 1 (NF1) gene. TLF is related in sequence and structure to TBP and the *Drosophila* TBP-related factor TRF1. TLF functions as gene-specific factor for RNA polymerase II-mediated transcription, but unlike TBP, TLF does not appear to be universal binding factor of other RNA polymerase complexes. TLF preferentially binds to and forms a stable complex with TFIIA. TFIIA is required as a core promoter selective factor for both basal and activated TFIID-mediated transcription as it enhances TBP/TFIID binding to DNA and alleviates TFIID repression that is mediated by negative cofactors.

REFERENCES

1. Meisterernst, M., et al. 1991. Family of proteins that interact with TFIID and regulate promoter activity. Cell 67: 557-567.
2. Orphanides, G., et al. 1996. The general transcription factors of RNA polymerase II. Genes Dev. 10: 2657-2683.
3. Lee, T.I., et al. 1998. Regulation of gene expression by TBP-associated proteins. Genes Dev. 12: 1398-1408.
4. Ozer, J., et al. 1998. Transcription factor IIA derepresses TATA-binding protein (TBP)-associated factor inhibition of TBP-DNA binding. J. Biol. Chem. 273: 14293-14300.
5. Rabenstein, M.D., et al. 1999. TATA box-binding protein (TBP)-related factor 2 (TRF2), a third member of the TBP family. Proc. Natl. Acad. Sci. USA 96: 4791-4796.

CHROMOSOMAL LOCATION

Genetic locus: TBPL1 (human) mapping to 6q23.2; Tbp1 (mouse) mapping to 10 A3.

SOURCE

TLF (C-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of TLF 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.

Blocking peptide available for competition studies, sc-10105 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

TLF (C-16) is recommended for detection of TLF 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

TLF (C-16) is also recommended for detection of TLF in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for TLF siRNA (h): sc-44158, TLF siRNA (m): sc-154293, TLF shRNA Plasmid (h): sc-44158-SH, TLF shRNA Plasmid (m): sc-154293-SH, TLF shRNA (h) Lentiviral Particles: sc-44158-V and TLF shRNA (m) Lentiviral Particles: sc-154293-V.

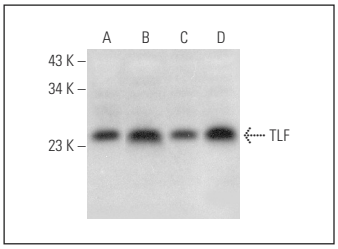
Molecular Weight of TLF: 21 kDa.

Positive Controls: F9 cell lysate: sc-2245, Jurkat whole cell lysate: sc-2204 or NTERA-2 cl.D1 whole cell lysate: sc-364181.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



TLF (C-16): sc-10105. Western blot analysis of TLF expression in F9 (**A**), NTERA-2 cl.D1 (**B**), Hep G2 (**C**) and Jurkat (**D**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Bush, S.D., et al. 2008. Variations in intracellular levels of TATA binding protein can affect specific genes by different mechanisms. Mol. Cell. Biol. 28: 83-92.

RESEARCH USE

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