SANTA CRUZ BIOTECHNOLOGY, INC.

# TLF (C-8): sc-514059

## 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. and Roeder, R.G. 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. 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.
4. Lee, T.I. and Young, R. 1998. Regulation of gene expression by TBP-associated proteins. Genes Dev. 12: 1398-1408.
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; Tbpl1 (mouse) mapping to 10 A3.

## SOURCE

TLF (C-8) is a mouse monoclonal antibody raised against amino acids 77-186 mapping at the C-terminus of TLF of human origin.

## PRODUCT

Each vial contains 200 µg $IgG_{2a}$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

TLF (C-8) is available conjugated to agarose (sc-514059 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514059 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514059 PE), fluorescein (sc-514059 FITC), Alexa Fluor® 488 (sc-514059 AF488), Alexa Fluor® 546 (sc-514059 AF546), Alexa Fluor® 594 (sc-514059 AF594) or Alexa Fluor® 647 (sc-514059 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514059 AF680) or Alexa Fluor® 790 (sc-514059 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

TLF (C-8) is recommended for detection of TLF 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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.

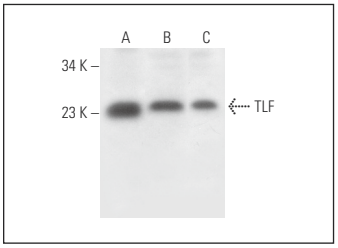
Molecular Weight of TLF: 21 kDa.

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

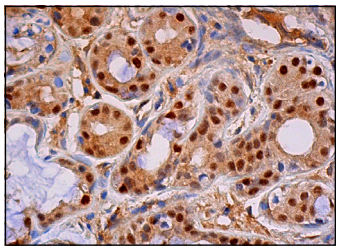
## RECOMMENDED SUPPORT REAGENTS

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 A/G PLUS-Agarose: sc-2003 (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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA




TLF (C-8): sc-514059. Western blot analysis of TLF expression in F9 (**A**), NTERA-2 cl.D1 (**B**) and Jurkat (**C**) whole cell lysates.



TLF (C-8): sc-514059. Immunoperoxidase staining of formalin fixed, paraffin-embedded human salivary gland tissue showing nuclear and cytoplasmic staining of glandular cells.

## 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.