SANTA CRUZ BIOTECHNOLOGY, INC.

TEF-4 (C-10): sc-518181

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The transcriptional enhancer factor (TEF)/TEAD family includes TEF-1, TEF-3, TEF-4 and TEF-5. These proteins share a highly conserved 68 amino acid TEA/ATTS DNA-binding domain, which binds to SV40 GT-IIC (GGAATG), SphI (AGTATG), SphII (AGCATG) and muscle-specific M-CAT (GGTATG) enhansons. TEFs are differentially expressed in human cultured cell lines and mouse embryonic and extra-embryonic tissues. Specifically, TEF-4 is strongly co-expressed with TEF-1 in mouse mitotic neuroblasts and is also detected in the gut and the nephrogenic region of the kidney. TEF-4 associates with the powerful transcriptional coactivator YAP65 to mediate mitogenic signals. In addition, TEF-4 promotes the activation of the CTP:phosphocholine cytidylyltransferase (CCT) α protein, which is the rate-limiting enzyme of phosphatidylcholine biosynthesis, by enhancing the transcriptional activity of Ets-1.

REFERENCES

1. Jacquemin, P., et al. 1996. A novel family of developmentally regulated mammalian transcription factors containing the TEA/ATTS DNA binding domain. J. Biol. Chem. 271: 21775-21785.
2. Jacquemin, P., et al. 1999. Localization of human transcription factor TEF-4 and TEF-5 (TEAD2, TEAD3) genes to chromosomes 19q13.3 and 6p21.2 using fluorescence *in situ* hybridization and radiation hybrid analysis. Genomics 55: 127-129.
3. Jiang, S.W., et al. 2000. Cooperative binding of TEF-1 to repeated GGAATG-related consensus elements with restricted spatial separation and orientation. DNA Cell Biol. 19: 507-514.
4. Sugimoto, H., et al. 2001. Identification of transcriptional enhancer factor-4 as a transcriptional modulator of CTP:phosphocholine cytidylyltransferase α. J. Biol. Chem. 276: 12338-12344.
5. Vassilev, A., et al. 2001. TEAD/TEF transcription factors utilize the activation domain of YAP65, a Src/Yes-associated protein localized in the cytoplasm. Genes Dev. 15: 1229-1241.
6. Sugimoto, H., et al. 2003. Identification of Ets-1 as an important transcriptional activator of CTP:phosphocholine cytidylyltransferase α in COS-7 cells and co-activation with transcriptional enhancer factor-4. J. Biol. Chem. 278: 19716-19722.

CHROMOSOMAL LOCATION

Genetic locus: TEAD2 (human) mapping to 19q13.33; Tead2 (mouse) mapping to 7 B4.

SOURCE

TEF-4 (C-10) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 279-299 of TEF-4 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.

APPLICATIONS

TEF-4 (C-10) is recommended for detection of TEF-4 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).

Suitable for use as control antibody for TEF-4 siRNA (h): sc-45232, TEF-4 siRNA (m): sc-45233, TEF-4 shRNA Plasmid (h): sc-45232-SH, TEF-4 shRNA Plasmid (m): sc-45233-SH, TEF-4 shRNA (h) Lentiviral Particles: sc-45232-V and TEF-4 shRNA (m) Lentiviral Particles: sc-45233-V.

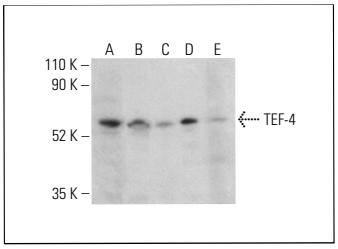
Molecular Weight of TEF-4: 49 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, HT-1080 whole cell lysate: sc-364183 or HEK293T whole cell lysate: sc-45137.

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



TEF-4 (C-10): sc-518181. Western blot analysis of TEF-4 expression in HEK293T (**A**), HeLa (**B**), A-431 (**C**) and HT-1080 (**D**) whole cell lysates and mouse colon tissue extract (**E**). Detection reagent used: m-IgGκ BP-HRP: sc-516102.

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.