

## TEF-4 (I-20): sc-32427

### 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) enhancers. 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 cytidyltransferase (CCT)  $\alpha$  protein, which is the rate-limiting enzyme of phosphatidylcholine biosynthesis, by enhancing the transcriptional activity of Ets-1.

### REFERENCES

- 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.
- 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.
- 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.
- Sugimoto, H., et al. 2001. Identification of transcriptional enhancer factor-4 as a transcriptional modulator of CTP: phosphocholine cytidyltransferase  $\alpha$ . *J. Biol. Chem.* 276: 12338-12344.
- 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.

### CHROMOSOMAL LOCATION

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

### SOURCE

TEF-4 (I-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of TEF-4 of human origin.

### PRODUCT

Each vial contains 200  $\mu$ g IgG 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-32427 X, 200  $\mu$ g/0.1 ml.

Blocking peptide available for competition studies, sc-32427 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### RESEARCH USE

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

### APPLICATIONS

TEF-4 (I-20) is recommended for detection of TEF-4 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

TEF-4 (I-20) is also recommended for detection of TEF-4 in additional species, including equine, canine, bovine and porcine.

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.

TEF-4 (I-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of TEF-4: 49 kDa.

Positive Controls: IMR-32 cell lysate: sc-2409.

### 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) 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.

### SELECT PRODUCT CITATIONS

- Ren, Y.R., et al. 2011. Structural analysis of the cancer-specific promoter in mesothelin and in other genes overexpressed in cancers. *J. Biol. Chem.* 286: 11960-11969.
- Ren, Y.R., et al. 2012. Unbiased discovery of interactions at a control locus driving expression of the cancer-specific therapeutic and diagnostic target, mesothelin. *J. Proteome Res.* 11: 5301-5310.

### STORAGE

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


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Try **TEF-4 (404C5a): sc-81397**, our highly recommended monoclonal alternative to TEF-4 (I-20).