# SANTA CRUZ BIOTECHNOLOGY, INC.

# TEF-1 (E-5): sc-393976



## BACKGROUND

A member of the TEA/ATTS domain family, transcriptional enhancer factor 1 (TEF-1) is a nuclear protein that is expressed in numerous cell types and plays a role in controlling the expression of numerous genes. TEF family members have a highly conserved DNA-binding domain; TEF-1 binds to GT-IIC, Sphl/II and M-CAT. TEF-1 also binds to the proximal regulatory element (PRE) of transforming growth factor- $\alpha$ , a member of the EGF family that is overexpressed in many types of cancer. Furthermore, TEF-1 represses transcription in placental cells. *In vitro*, TEF-1 is phosphorylated by several PKC isozymes. TEF-1 is phosphorylated *in vivo* at serine and threonine residues. Phosphorylation of TEF-1, both *in vivo* and *in vitro*, results in a reduction in its DNA-binding capability, which suggests a potential role for TEF-1 in PKC inhibition. TEF-1 also complexes with larger tumor antigen (TAg), and may thus have a role in tumorigenesis. Dimerization of TEF-1 may be important for TEF-1 to function as a regulator of gene transcription.

# **CHROMOSOMAL LOCATION**

Genetic locus: TEAD1 (human) mapping to 11p15.3; Tead1 (mouse) mapping to 7 F1.

## SOURCE

TEF-1 (E-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 174-209 within an internal region of TEF-1 of human origin.

## PRODUCT

Each vial contains 200  $\mu g\, lgG_1$  kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

TEF-1 (E-5) is available conjugated to agarose (sc-393976 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393976 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393976 PE), fluorescein (sc-393976 FITC), Alexa Fluor<sup>®</sup> 488 (sc-393976 AF488), Alexa Fluor<sup>®</sup> 546 (sc-393976 AF546), Alexa Fluor<sup>®</sup> 594 (sc-393976 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-393976 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-393976 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-393976 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-393976 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

#### **STORAGE**

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

## **PROTOCOLS**

See our web site at www.scbt.com for detailed protocols and support products.

### **APPLICATIONS**

TEF-1 (E-5) is recommended for detection of TEF-1 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).

TEF-1 (E-5) is also recommended for detection of TEF-1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for TEF-1 siRNA (h): sc-106608, TEF-1 siRNA (m): sc-154178, TEF-1 shRNA Plasmid (h): sc-106608-SH, TEF-1 shRNA Plasmid (m): sc-154178-SH, TEF-1 shRNA (h) Lentiviral Particles: sc-106608-V and TEF-1 shRNA (m) Lentiviral Particles: sc-154178-V.

Molecular Weight of TEF-1: 48 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201, JAR cell lysate: sc-2276 or PC-12 cell lysate: sc-2250.

## DATA





TEF-1 (E-5): sc-393976. Western blot analysis of TEF-1 expression in HeLa nuclear extract (A) and 293T (B), JAR (C), A-431 (D), PC-12 (E) and F9 (F) whole cell lysates.

TEF-1 (E-5): sc-393976. Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing nuclear staining of decidual cells.

#### **SELECT PRODUCT CITATIONS**

- Wu, L.M.N., et al. 2018. Programming of Schwann cells by Lats1/2-TAZ/ YAP signaling drives malignant peripheral nerve sheath tumorigenesis. Cancer Cell 33: 292-308.e7.
- Qian, B., et al. 2021. m<sup>6</sup>A modification promotes miR-133a repression during cardiac development and hypertrophy via IGF2BP2. Cell Death Discov. 7: 157.
- 3. Yamada, S., et al. 2023. TEAD1 trapping by the Q353R-Lamin A/C causes dilated cardiomyopathy. Sci. Adv. 9: eade7047.
- Shi, X., et al. 2024. SUMOylation of TEAD1 modulates the mechanism of pathological cardiac hypertrophy. Adv. Sci. 11: e2305677.

#### **RESEARCH USE**

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