SANTA CRUZ BIOTECHNOLOGY, INC.

TEF-1 (V-25): sc-134070

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, SphI/II and M-CAT. TEF-1 also binds to the proximal regulatory element (PRE) of transforming growth factor-α, 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.

REFERENCES

1. Takahashi, H., Kobayashi, H., Matsuo, S. and Iizuka, H. 1995. Repression of involucrin gene expression by transcriptional enhancer factor 1 (TEF-1). Arch. Dermatol. Res. 287: 740-746.
2. Wang, D. and Kudlow, J.E. 1999. Purification and characterization of TEF-1, a transcription factor that controls the human transforming growth factor-α promoter. Biochim. Biophys. Acta 1449: 50-62.
3. Jiang, S.W., Trujillo, M.A., Sakagashira, M., Wilke, R.A. and Eberhardt, N.L. 2000. Novel human TEF-1 isoforms exhibit altered DNA binding and functional properties. Biochemistry 39: 3505-3513.
4. Jiang, S.W., Desai, D., Khan, S. and Eberhardt, N.L. 2000. Cooperative binding of TEF-1 to repeated GGAATG-related consensus elements with restricted spatial separation and orientation. DNA Cell Biol. 19: 507-514.
5. Jiang, S.W., Dong, M., Trujillo, M.A., Miller, L.J. and Eberhardt, N.L. 2001. DNA binding of TEA/ATTS domain factors is regulated by protein kinase C phosphorylation in human choriocarcinoma cells. J. Biol. Chem. 276: 23464-23470.

CHROMOSOMAL LOCATION

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

SOURCE

TEF-1 (V-25) is an affinity purified rabbit polyclonal antibody raised against synthetic TEF-1 peptide of human origin.

PRODUCT

Each vial contains 50 µg IgG in 500 µl PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

STORAGE

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

APPLICATIONS

TEF-1 (V-25) is recommended for detection of TEF-1 of mouse, rat, human and zebrafish 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), 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 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.

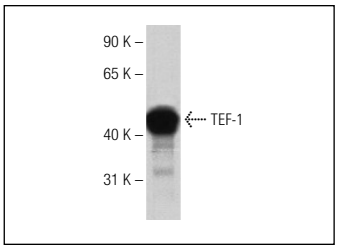
Molecular Weight of TEF-1: 48 kDa.

Positive Controls: human fetal muscle tissue extract.

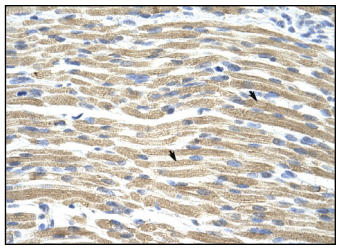
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



TEF-1 (V-25): sc-134070. Western blot analysis of TEF-1 expression in human fetal muscle tissue extract.



TEF-1 (V-25): sc-134070. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human muscle tissue showing nuclear and cytoplasmic localization.

RESEARCH USE

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