SANTA CRUZ BIOTECHNOLOGY, INC.

TEF-1 (P-17): sc-23793

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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., et al. 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., 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. Jiang, S.W., et al. 2000. Novel human TEF-1 isoforms exhibit altered DNA binding and functional properties. Biochemistry 39: 3505-3513.
5. Jiang, S.W., et al. 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 (P-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of TEF-1 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-23793 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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 (P-17) is recommended for detection of TEF-1 of mouse, rat and human 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

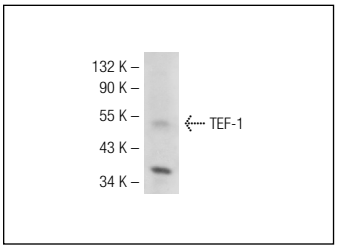
TEF-1 (P-17) is also recommended for detection of TEF-1 in additional species, including equine, canine, bovine and porcine.

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: HeLa nuclear extract: sc-2120.

DATA



TEF-1 (P-17): sc-23793. Western blot analysis of TEF-1 expression in HeLa nuclear extract.

SELECT PRODUCT CITATIONS

1. Tao, S., et al. 2013. Tanshinone I activates the Nrf2-dependent antioxidant response and protects against As(III)-induced lung inflammation *in vitro* and *in vivo*. Antioxid. Redox. Signal. 19: 1647-1661.

RESEARCH USE

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

PROTOCOLS

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