

TEF-1 (B-2): sc-398227

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, Spl/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 (B-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 181-208 within an internal region of TEF-1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-398227 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

TEF-1 (B-2) 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 μ g per 100-500 μ g 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 (B-2) 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.

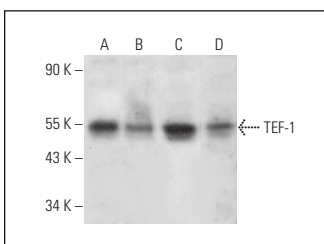
Positive Controls: HeLa nuclear extract: sc-2120, JAR cell lysate: sc-2276 or A-673 cell lysate: sc-2414.

RECOMMENDED SUPPORT REAGENTS

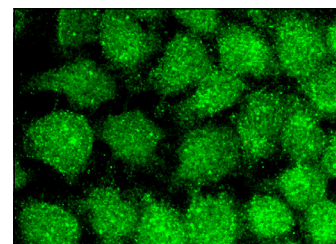
To ensure optimal results, the following support reagents are recommended:

- 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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 A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).
- 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ 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-1 (B-2): sc-398227. Western blot analysis of TEF-1 expression in HeLa nuclear extract (A) and JAR (B), F9 (C) and A-673 (D) whole cell lysates.



TEF-1 (B-2): sc-398227. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear and cytoplasmic localization.

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.