SANTA CRUZ BIOTECHNOLOGY, INC.

TEF-1 (H-4): sc-376113

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.

REFERENCE

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., et al. 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.

CHROMOSOMAL LOCATION

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

SOURCE

TEF-1 (H-4) is a mouse monoclonal antibody raised against amino acids 133-173 mapping within an internal region of TEF-1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain 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-376113 X, 200 µg/0.1 ml.

TEF-1 (H-4) is available conjugated to agarose (sc-376113 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376113 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376113 PE), fluorescein (sc-376113 FITC), Alexa Fluor® 488 (sc-376113 AF488), Alexa Fluor® 546 (sc-376113 AF546), Alexa Fluor® 594 (sc-376113 AF594) or Alexa Fluor® 647 (sc-376113 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376113 AF680) or Alexa Fluor® 790 (sc-376113 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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 (H-4) 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

TEF-1 (H-4) is also recommended for detection of TEF-1 in additional species, including equine, bovine, porcine and avian.

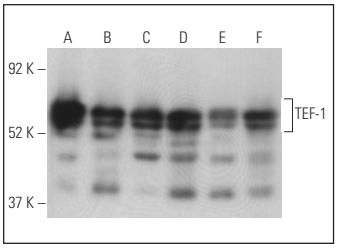
Suitable for use as control antibody for TEF-1 siRNA (h): sc-106608, TEF-1 siRNA (m): sc-154178, TEF-1 shRNA Plasmid (h): sc-106608-SH, TEF-1 shRNA Plasmid (m): sc-154178-SH, TEF-1 shRNA (h) Lentiviral Particles: sc-106608-V and TEF-1 shRNA (m) Lentiviral Particles: sc-154178-V.

TEF-1 (H-4) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

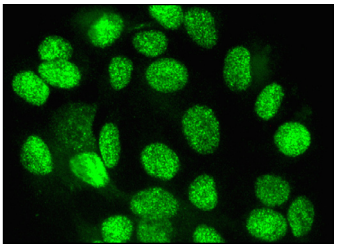
Molecular Weight of TEF-1: 48 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, PC-3 cell lysate: sc-2220 or JAR cell lysate: sc-2276.

DATA



TEF-1 (H-4): sc-376113. Western blot analysis of TEF-1 expression in HeLa nuclear extract (**A**) and JAR (**B**), PC-3 (**C**), HEK293T (**D**), A-673 (**E**) and F9 (**F**) whole cell lysates. Detection reagent used: m-IgG_1 BP-HRP: sc-525408.



TEF-1 (H-4): sc-376113. Immunofluorescence staining of formalin-fixed Hep G2 cells showing nuclear localization.

SELECT PRODUCT CITATIONS

1. Mamada, H., et al. 2015. Cell competition in mouse NIH/3T3 embryonic fibroblasts is controlled by the activity of Tead family proteins and Myc. J. Cell Sci. 128: 790-803.
2. Moreno-Vicente, R., et al. 2019. Caveolin-1 modulates mechanotransduction responses to substrate stiffness through Actin-dependent control of YAP. Cell Rep. 26: 1679-1680.
3. Mukhtar, T., et al. 2020. Tead transcription factors differentially regulate cortical development. Sci. Rep. 10: 4625.
4. Gómez-Marín, E., et al. 2022. The high mobility group protein HMG20A cooperates with the histone reader PHF14 to modulate TGFβ and Hippo pathways. Nucleic Acids Res. 50: 9838-9857.

RESEARCH USE

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