

TCF-4 (H-7): sc-271287

BACKGROUND

T cell factors (TCFs) comprise a family of DNA-binding transcriptional activators that are essential for lymphoid cell development. These transcription factors are activated by the Wnt-1 and Wingless pathways and are characterized by the presence of a conserved protein motif, the high mobility group (HMG) 1 box, which mediates DNA binding. TCF-4 mainly localizes in the cytoplasm and is transported into the nucleus directly bound to β -catenin in a cooperative manner. This TCF-4/ β -catenin complex induces expression of Wnt target genes, including multiple cancer-associated genes. c-Jun also interacts with TCF-4 and β -catenin, and the phosphorylation-dependent interaction between c-Jun and TCF-4 regulates intestinal tumorigenesis by integrating JNK and APC/ β -catenin. TCF-4 is also implicated in bipolar affective disorder.

CHROMOSOMAL LOCATION

Genetic locus: TCF7L2 (human) mapping to 10q25.2; Tcf7l2 (mouse) mapping to 19 D2.

SOURCE

TCF-4 (H-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 565-592 at the C-terminus of TCF-4 of human origin.

PRODUCT

Each vial contains 200 μ g IgG₃ 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-271287 X, 200 μ g/0.1 ml.

Blocking peptide available for competition studies, sc-271287 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

TCF-4 (H-7) is recommended for detection of TCF-4 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).

Suitable for use as control antibody for TCF-4 siRNA (h): sc-43525, TCF-4 siRNA (m): sc-43526, TCF-4 shRNA Plasmid (h): sc-43525-SH, TCF-4 shRNA Plasmid (m): sc-43526-SH, TCF-4 shRNA (h) Lentiviral Particles: sc-43525-V and TCF-4 shRNA (m) Lentiviral Particles: sc-43526-V.

TCF-4 (H-7) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

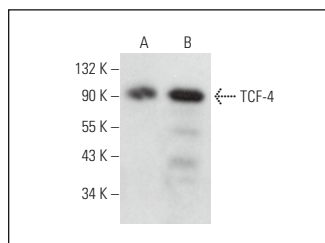
Molecular Weight of TCF-4: 60 kDa.

Positive Controls: TCF-3 (h): 293T Lysate: sc-116647, HUV-EC-C whole cell lysate: sc-364180 or HeLa nuclear extract: sc-2120.

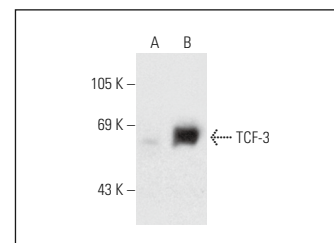
RECOMMENDED SUPPORT REAGENTS

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



TCF-4 (H-7): sc-271287. Western blot analysis of TCF-4 expression in HeLa nuclear extract (A) and HUV-EC-C whole cell lysate (B).



TCF-4 (H-7): sc-271287. Western blot analysis of TCF-3 expression in non-transfected: sc-117752 (A) and human TCF-3 transfected: sc-116647 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

- Ding, L., et al. 2018. Upregulation of circ_001569 predicts poor prognosis and promotes cell proliferation in non-small cell lung cancer by regulating the Wnt/ β -catenin pathway. *Oncol. Lett.* 16: 453-458.
- Su, J., et al. 2019. ROR α suppresses epithelial-to-mesenchymal transition and invasion in human gastric cancer cells via the Wnt/ β -catenin pathway. *Front. Oncol.* 9: 1344.
- Cui, J., et al. 2020. Chikusetsu saponin IVa protects pancreatic β cell against intermittent high glucose-induced injury by activating Wnt/ β -catenin/TCF7L2 pathway. *Aging* 12: 1591-1609.
- Yasen, X., et al. 2024. IL-33/soluble ST2 axis is associated with radiation-induced cardiac injury. *Open Life Sci.* 19: 20220841.

RESEARCH USE

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

PROTOCOLS

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



See **TCF-4 (D-4): sc-166699** for TCF-4 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.