SANTA CRUZ BIOTECHNOLOGY, INC.

TCF-4 (C-19): sc-8632

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 TCF4 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, TCF7L1 (human) mapping to 2p11.2; Tcf7l2 (mouse) mapping to 19 D2, Tcf3 (mouse) mapping to 6 C1.

SOURCE

TCF-4 (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of TCF-4 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. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-8632 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-8632 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.

RESEARCH USE

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

APPLICATIONS

TCF-4 (C-19) is recommended for detection of TCF-4 and, to a lesser extent, TCF-3 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)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

TCF-4 (C-19) is also recommended for detection of TCF-4 and, to a lesser extent, TCF-3 in additional species, including porcine.

TCF-4 (C-19) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

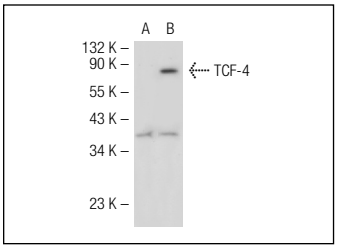
Molecular Weight of TCF-4: 60 kDa.

Positive Controls: TCF-4 (h): 293T Lysate: sc-115204, HCT-116 whole cell lysate: sc-364175 or HeLa nuclear extract: sc-2120.

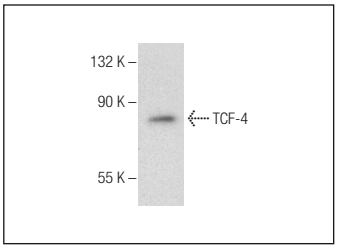
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



TCF-4 (C-19): sc-8632. Western blot analysis of TCF-4 expression in non-transfected: sc-117752 (**A**) and human TCF-4 transfected: sc-115204 (**B**) 293T whole cell lysates.



TCF-4 (C-19): sc-8632. Western blot analysis of TCF-4 expression in HCT-116 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Palmer, H.G., et al. 2001. Vitamin D_3 promotes the differentiation of colon carcinoma cells by the induction of E-cadherin and the inhibition of β-catenin signaling. J. Cell Biol. 154: 369-387.
2. Pedrosa, E., et al. 2010. β-catenin promoter ChIP-chip reveals potential schizophrenia and bipolar disorder gene network. J. Neurogenet. 24: 182-193.
3. Bordonaro, M., et al. 2011. The Notch ligand Delta-like 1 integrates inputs from TGFβ/activin and Wnt pathways. Exp. Cell Res. 317: 1368-1381.
4. Chiaro, C., et al. 2012. Tcf3 and cell cycle factors contribute to butyrate resistance in colorectal cancer cells. Biochem. Biophys. Res. Commun. 428: 121-126.
5. Ding, Z.Y., et al. 2014. Smad6 suppresses the growth and self-renewal of hepatic progenitor cells. J. Cell. Physiol. 229: 651-660.

PROTOCOLS

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