SANTA CRUZ BIOTECHNOLOGY, INC.

TCF-1 (H-118): sc-13025

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

T-cell factor-1 (TCF-1) is a DNA-binding transcriptional activator that is essential for lymphoid cell development. The TCF family of 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. Several alternative splice variants of TCF-1 have been identified, including TCF-1A, which share a conserved amino terminus and differ in the carboxy terminal sequences. The Wnt mediated signaling pathway induces cytosolic β-catenin binding to TCF proteins within the nucleus, leading to the enhanced expression of the Wnt target genes. The β-catenin-TCF complexes are negatively regulated by the adenomatous polyposis coli (APC) tumor suppressor protein, which phosphorylates β-catenin and, in turn, increases the degradation of cytosolic β-catenin and inhibits the transcriptional activity of the TCF proteins. Mutations in the APC gene, which are commonly observed in colorectal carcinomas, disrupt this regulatory pathway and correlate with an accumulation of β-catenin and the increased activation of the TCF target genes.

CHROMOSOMAL LOCATION

Genetic locus: TCF7 (human) mapping to 5q31.1; Tcf7 (mouse) mapping to 11 B1.3.

SOURCE

TCF-1 (H-118) is a rabbit polyclonal antibody raised against amino acids 1-118 mapping at the N-terminus of TCF-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. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-13025 X, 200 µg/0.1 ml.

APPLICATIONS

TCF-1 (H-118) is recommended for detection of TCF-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).

TCF-1 (H-118) is also recommended for detection of TCF-1 in additional species, including bovine.

Suitable for use as control antibody for TCF-1 siRNA (h): sc-106926, TCF-1 siRNA (m): sc-36617, TCF-1 shRNA Plasmid (h): sc-106926-SH, TCF-1 shRNA Plasmid (m): sc-36617-SH, TCF-1 shRNA (h) Lentiviral Particles: sc-106926-V and TCF-1 shRNA (m) Lentiviral Particles: sc-36617-V.

TCF-1 (H-118) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

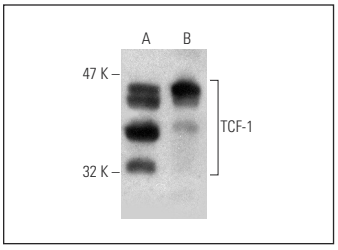
Molecular Weight of TCF-1: 22-55 kDa.

Positive Controls: MOLT-4 cell lysate: sc-2233, A549 cell lysate: sc-2413 or SW480 cell lysate: sc-2219.

STORAGE

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

DATA



TCF-1 (H-118): sc-13025. Western blot analysis of TCF-1 expression in A549 (**A**) and SW480 (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Huang, Z., et al. 2006. Transcriptional regulation of CD4 gene expression by T cell factor-1/β-catenin pathway. J. Immunol. 176: 4880-4887.
2. Hebenstreit, D., et al. 2008. LEF-1 negatively controls interleukin-4 expression through a proximal promoter regulatory element. J. Biol. Chem. 283: 22490-22497.
3. Sato, M.M., et al. 2009. Bone morphogenetic protein-2 enhances Wnt/β-catenin signaling-induced osteoprotegerin expression. Genes Cells 14: 141-153.
4. Lambertini, E., et al. 2010. SLUG: a new target of lymphoid enhancer factor-1 in human osteoblasts. BMC Mol. Biol. 11: 13.

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.