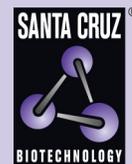


# TCF-3 (M-155): sc-13026



The Power to Question

## BACKGROUND

The TCF/LEF 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. The TCF (T cell factor) proteins are required during developmental pathways. TCF-1 is essential for lymphoid cell development, while two other members, TCF-3 and TCF-4, are implicated in the development of the central nervous system. The Wnt mediated signaling pathway induces cytosolic  $\beta$ -catenin binding to TCF proteins within the nucleus, leading to the enhanced expression of the Wnt target genes. The  $\beta$ -catenin-TCF complexes are negatively regulated by the adenomatous polyposis coli (APC) tumor suppressor protein, which phosphorylates  $\beta$ -catenin and, in turn, increases the degradation of cytosolic  $\beta$ -catenin to, thereby, inhibit the activity of TCF proteins. Mutations in the APC gene, which are commonly observed in colorectal carcinomas, disrupt this regulatory pathway and correlate with an accumulation of  $\beta$ -catenin and the increased activation of the TCF target genes.

## REFERENCES

1. Van de Wetering, M., et al. 1991. Identification and cloning of TCF-1, a T lymphocyte-specific transcription factor containing a sequence-specific HMG box. *EMBO J.* 10: 123-132.
2. Van de Wetering, M., et al. 1992. The human T cell transcription factor-1 gene. Structure, localization, and promoter characterization. *J. Biol. Chem.* 267: 8530-8536.
3. Verbeek, S., et al. 1995. An HMG-box-containing T-cell factor required for thymocyte differentiation. *Nature* 374: 70-74.
4. Morin, P.J., et al. 1997. Activation of  $\beta$ -catenin-TCF signaling in colon cancer by mutations in  $\beta$ -catenin or APC. *Science* 275: 1787-1790.
4. Mayer, K., et al. 1995. The human high mobility group (HMG)-box transcription factor TCF-1: novel isoforms due to alternative splicing and usage of a new exon IXA. *Biochim. Biophys. Acta* 1263: 169-172.
6. Young, C.S., et al. 1998. Wnt-1 induces growth, cytosolic  $\beta$ -catenin, and TCF/LEF transcriptional activation in Rat-1 fibroblasts. *Mol. Cell. Biol.* 18: 2474-2485.

## CHROMOSOMAL LOCATION

Genetic locus: TCF7L1 (human) mapping to 2p11.2; Tcf7l1 (mouse) mapping to 6 C1.

## SOURCE

TCF-3 (M-155) is a rabbit polyclonal antibody raised against amino acids 421-575 mapping near the C-terminus of TCF-3 of mouse origin.

## PRODUCT

Each vial contains 200  $\mu$ g 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-13026 X, 200  $\mu$ g/0.1 ml.

## APPLICATIONS

TCF-3 (M-155) is recommended for detection of TCF-3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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).

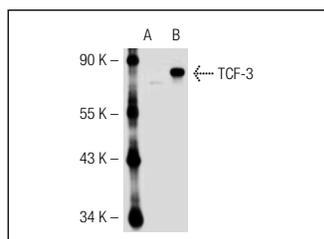
Suitable for use as control antibody for TCF-3 siRNA (h): sc-36618, TCF-3 siRNA (m): sc-36619, TCF-3 shRNA Plasmid (h): sc-36618-SH, TCF-3 shRNA Plasmid (m): sc-36619-SH, TCF-3 shRNA (h) Lentiviral Particles: sc-36618-V and TCF-3 shRNA (m) Lentiviral Particles: sc-36619-V.

TCF-3 (M-155) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of TCF-3: 75 kDa.

Positive Controls: TCF-3 (h): 293T Lysate: sc-116647.

## DATA



TCF-3 (M-155): sc-13026. 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

1. Ray, S., et al. 2008. Cooperative control via lymphoid enhancer factor 1/T cell factor 3 and estrogen receptor- $\alpha$  for uterine gene regulation by estrogen. *Mol. Endocrinol.* 22: 1125-1140.

## 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.



Try **TCF-3 (E-2): sc-166411** or **TCF-3 (F-5): sc-398640**, our highly recommended monoclonal alternatives to TCF-3 (M-155). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **TCF-3 (E-2): sc-166411**.