

TCF-3 (M-20): sc-8635

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 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 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 β -catenin and the increased activation of the TCF target genes.

CHROMOSOMAL LOCATION

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

SOURCE

TCF-3 (M-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of TCF-3 of mouse origin.

PRODUCT

Each vial contains 200 μ 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-8635 X, 200 μ g/0.1 ml.

TCF-3 (M-20) is available conjugated to agarose (sc-8635 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP.

Blocking peptide available for competition studies, sc-8635 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

TCF-3 (M-20) 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 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). TCF-3 (M-20) is also recommended for detection of TCF-3 in additional species, including equine, canine, bovine and porcine.

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.

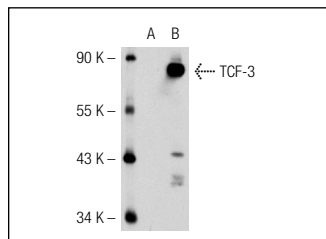
TCF-3 (M-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of TCF-3: 75 kDa.

STORAGE

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

DATA



TCF-3 (M-20): sc-8635. 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. Tebar, M., et al. 2001. Expression of Tcf/Lef and sFrp and localization of β -catenin in the developing mouse lung. *Mech. Dev.* 109: 437-440.
2. Park, J.I., et al. 2009. Telomerase modulates Wnt signalling by association with target gene chromatin. *Nature* 460: 66-72.
3. Weise, A., et al. 2009. Alternative splicing of Tcf7l2 transcripts generates protein variants with differential promoter-binding and transcriptional activation properties at Wnt/ β -catenin targets. *Nucleic Acids Res.* 38: 1964-1981.
4. Park, J.I., et al. 2009. Telomerase modulates Wnt signalling by association with target gene chromatin. *Nature* 460: 66-72.
5. Kuwahara, A., et al. 2010. Wnt signaling and its downstream target N-myc regulate basal progenitors in the developing neocortex. *Development* 137: 1035-1044.
6. Luderer, H.F., et al. 2011. Lymphoid enhancer-binding factor-1 (LEF1) interacts with the DNA-binding domain of the vitamin D receptor. *J. Biol. Chem.* 286: 18444-18451.
7. 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.

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-20). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **TCF-3 (E-2): sc-166411**.